Healthy People Living in Healthy Communities

A Report on the Health of South Carolina's People and Environment

2006

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

DHEC

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Message from the Commissioner

As I begin this introduction to Healthy People Living in Healthy Communities, I am struck by the fact that yet another year has flown by. And as is the case each year when I try to summarize the current state of the public's health and the environment in which we live, I am amazed by all of the challenges we face and somehow manage to overcome. This year was certainly no exception. In fact, in my mind, it tops them all. Consider this:

The year began with a call to action in the middle of a cold January night when a train derailment in the little town of Graniteville quickly called into action all of the emergency response and bioterrorism training so many of us have been undergoing in recent years. Our presence at the event and our work with the community didn't last one or two days...it lasted for weeks. And in many respects, it continues still.

In May, the state found itself responding to the largest foodborne outbreak in recent history with 304 suspected or confirmed cases of Salmonella poisoning, including more than 50 hospitalizations and one death.

Then hurricane season began. Even as the season ended on November 30, we found ourselves watching a record-breaking 26th named storm of the season. It was a season that brought upon our neighbors in the Gulf Coast the most devastating natural disaster this country has seen in recent history...perhaps of all times. And as good coastal neighbors who have been there before, and good stewards of public health, our state stepped in to help in the wake of Hurricane Katrina. Perhaps we responded so willingly because we all realized that with the slightest turn of one tropical system, it could have been us. As we count our many blessings this year, let one of those be that the state of South Carolina was spared the direct onslaught of this record-breaking hurricane season.

But that wasn't all. This year saw the fourth straight year of state budget reductions, while gasoline prices in South Carolina rose to a record high, having an unprecedented effect on the bottom line of many governmental agencies...including DHEC. Travel restrictions were put into place, forcing our agency and many others to become very creative in finding ways to accomplish our missions and fulfill our responsibilities without getting in a vehicle to do so. For an agency like DHEC, this is no small challenge when our day-to-day responsibilities revolve so much around on-site inspections and investigations.

And in December, we found the year-end icing on our 2005 cake of challenges. On December 31, we realized what we had known was coming for five years...and that was the loss of thousands of years of public health and environmental protection experience with the departure of the first round of TERI employees. But this was only the beginning. That loss of experience, expertise and institutional knowledge will continue in the course of the next several years, with the number of staff leaving in 2006 even higher than the numbers of 2005.

So how do you wrap all that up?

What would you say to members of the public about the state of our public's health and the environment in which we live if you were commissioner?

How do we as a state remain positive in light of so many challenges?

It's not easy. And yet, we see progress. We see improvement in several key areas, which you'll see highlighted in this report. And while the final results we ultimately hope to achieve may not have been realized in 2005, we inched ever closer to them.

And we made that progress as a state...not as one agency, or one group of individuals...but as an entire state that realizes we can do better...that we must do better. And we must do better in spite of whatever challenges come our way...whether it's an unforeseen natural disaster or other emergency that affects hundreds or thousands of people; or budget reductions and cost increases to vital programs; or the complete turnover of the staffing that has provided the backbone of public health and environmental protection for the last 30 years.

Challenges make us stronger, and the challenges we faced in 2005 have done just that. The challenges we face in 2006 will be no different. But we can only overcome them if we continue to work together. Let us each accept our individual responsibilities for improving South Carolina's health and environment, and let us recommit ourselves in the coming year to accept the responsibilities we carry together as a state...if not for our sakes, then for the citizens of this great state who will come after us.

C. Earl Hunter

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About this book

The title of this book reflects the S.C. Department of Health and Environmental Control's long-term vision for the future of South Carolina, healthy people living in healthy communities. The long-term goals from the agency's 2005-2010 Strategic Plan are defined and addressed within each broad chapter subject. The goals reflect our role as the state's public health and environmental agency in carrying out the three core functions of public health: assessment, policy development and assurance. The goals also build on national efforts in public health such as Healthy People 2010. These goals are statements of long-term changes that will move us toward our vision. For more information on Healthy People 2010, see Pages 62-69. A general appendix with more detailed data begins on Page 56.

Para informacion en espanol, comunicarse con su departamento de salud local (vea Pagina 70).

Who we are...

The S.C. Department of Health and Environmental Control touches the life of every South Carolinian every day. From making sure that drinking water is clean to assuring immunizations are provided to the most vulnerable populations, the approximately 4,350 full-time employees and an approximately 512 additional hourly/temporary employees provide services through state, region and county offices.

The General Assembly created DHEC in 1973 when it reunited the State Board of Health (created in 1878) and the Pollution Control Authority. The agency's mission is to promote and protect the health of the public and the environment. The agency is under the supervision of the Board of Health and Environmental Control, which has seven members, one from each congressional district and one at large. The governor, with the advice and consent of the Senate, appoints members.

Besides our offices in Columbia, DHEC operates eight regional health and environmental offices as well as local health departments and clinics to ensure that the many programs and services we provide will meet the needs of local areas. Our services fall under four general areas: Health Services, Health Regulation, Environmental Quality Control and Ocean and Coastal Resource Management.

Health Services includes activities to prevent chronic and infectious diseases; promote healthy mothers, babies and families; improve and assure environmental health in areas such as restaurant sanitation, septic tanks and vector control; perform laboratory analyses for infectious diseases and newborn screening; encourage the reduction of health disparities; and support seniors with in-home health care needs.

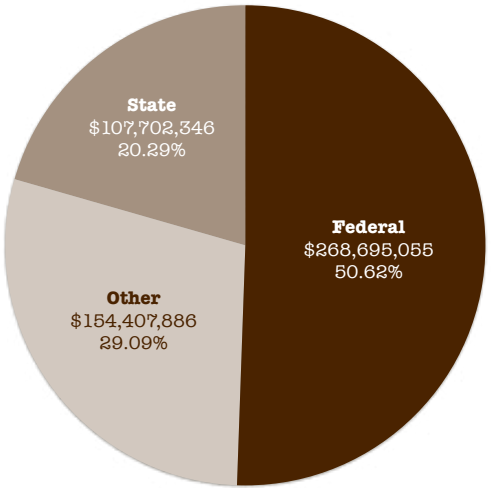
Health Regulation oversees the development of a State Health Plan to address the need for medical facilities and services; licenses, certifies and inspects health care facilities; regulates, licenses and inspects sources of electronically produced radiation (X-rays); and oversees entities that provide emergency medical services in the state.

Environmental Quality Control enforces federal and state environmental laws and regulations; issues permits, licenses and certifications for activities that might affect the environment; responds to complaints on environmental activities; inspects permitted entities; responds to environmental emergencies; and conducts environmental education and outreach activities.

The Office of Ocean and Coastal Resource Management enforces the S.C. Coastal Zone Management Act to protect coastal resources and promote responsible development through permitting and certification programs in the eight coastal counties.

DHEC's total budget for fiscal year 2006 (July 1, 2005, through June 30, 2006), including state, federal and other funds, was $530,805,287.

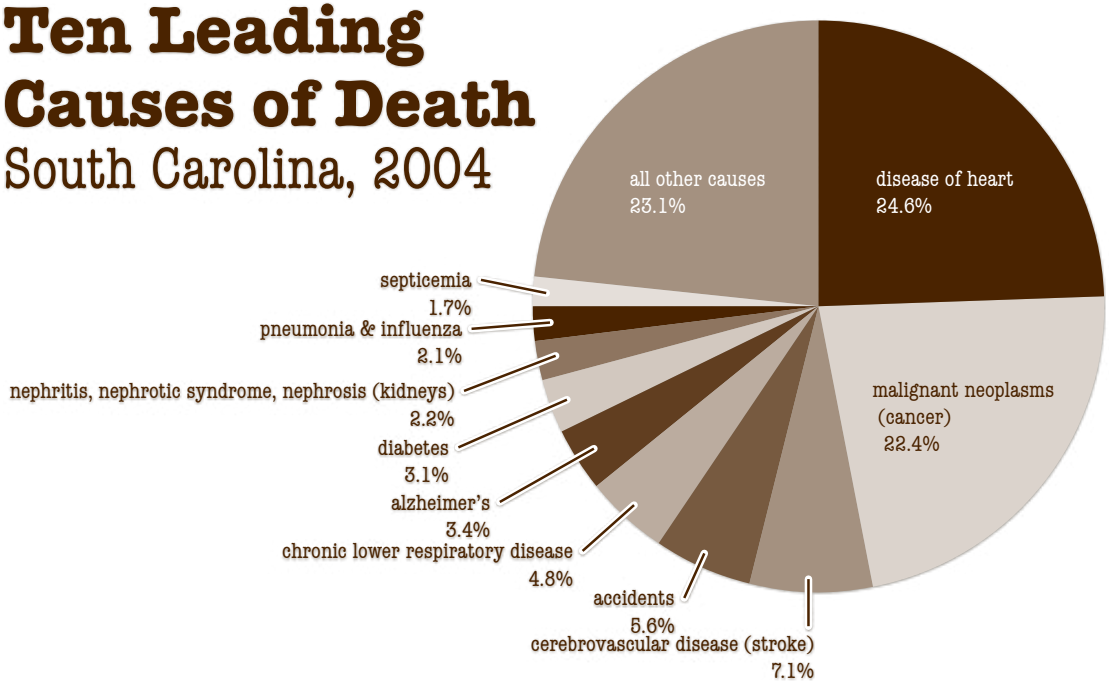
DHEC Funding Sources
Fiscal Year 2006



Increase Support to and Involvement by Communities in Developing Healthy and Environmentally Sound Communities

A healthy community recognizes that health is more than merely an absence of disease; a healthy community includes elements that enable people to maintain a high quality of life and productivity. Good health encompasses physical, environmental, emotional, social and economic well-being. Because public health issues usually have more than one cause, a comprehensive effort using several interventions is required. DHEC focuses on communities and works through their existing structures and values, helping bring to the table a wide range of entities – governmental, private, nonprofit, faith-based, media, for example – to affect improvement. DHEC works with communities to help them identify their needs, develop strategies toward improvement, and find the resources to assist in reaching their goals.

Ten Leading Causes of Death
South Carolina, 2004



PARTNERSHIPS MAKE COMMUNITIES STRONGER

DHEC's approach to addressing community health and environmental issues incorporates a whole community approach. A "community" is a group of people who have a common interest. Members of communities typically live or work in the same location or environment and can influence or are influenced by the social, economic and physical risk factors in that environment. Collaboration builds on the belief that community members who share values and goals can accomplish more by working together than they can on their own.

In partnership with local stakeholders, DHEC in 2005 initiated or continued its efforts in local communities to address issues such as improving air quality; obesity and overweight; diabetes; unintentional injuries to children; cleaning up contaminated sites; and planning for growth to prevent problems with solid waste, drinking water, surface waters such as rivers, lakes and streams; and aging wastewater and drinking water facilities. A new focus on public health preparedness also is paying off with local communities having better information and state resources to respond to disasters.

COMMUNITY

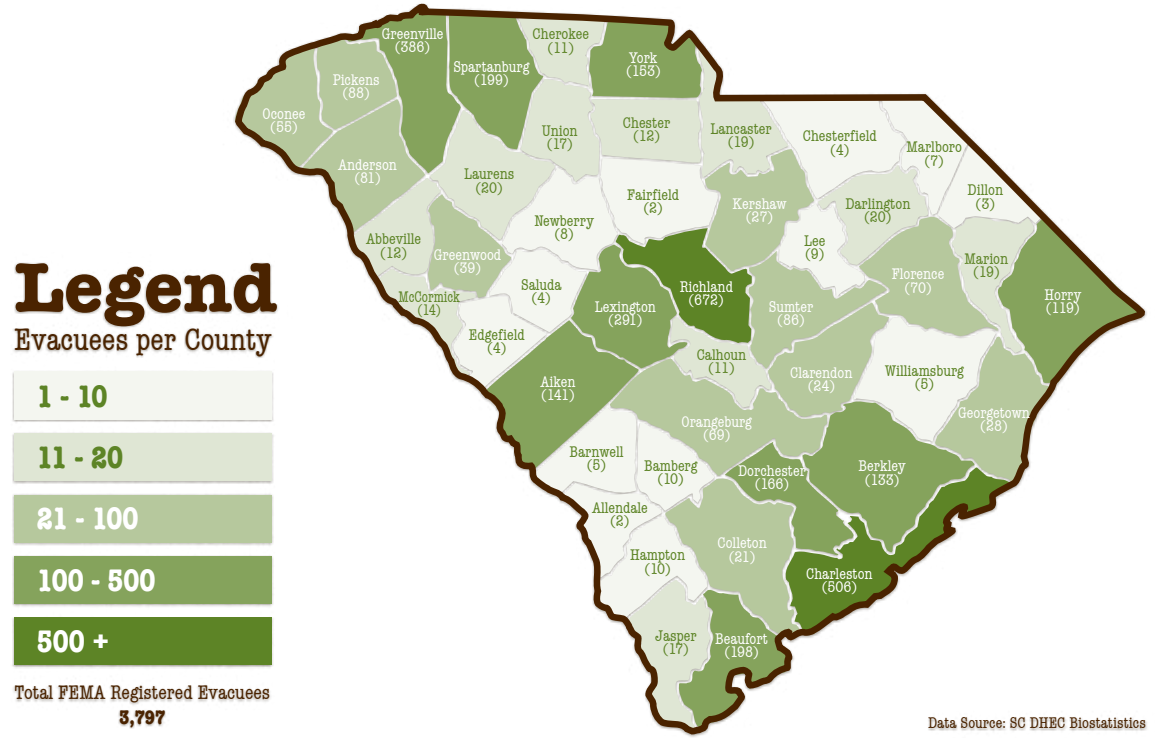
STORM VICTIMS FIND REFUGE IN SOUTH CAROLINA

FEMA organized evacuee transfers in the aftermath of **Hurricane Katrina**, which ravaged Louisiana, Alabama and Mississippi. Storm-weary evacuees left homeless by Hurricane Katrina began new lives in South Carolina beginning in September. They brought with them horrific stories of being trapped in rising waters, one group having spent a week on the second floor of an elementary school. The smell of contaminated water haunted them; some missed the pets they couldn't bring with them. Many of the rescued did not know their destination until they landed in South Carolina cities. Some arrived sick, needing medicines and medical attention. By Nov. 23, South Carolina had opened its arms to almost 3,800 FEMA-registered evacuees. Every South Carolina county harbored storm victims.

DHEC's public health preparedness system went to work, providing doctors, nurses, social workers and environmental health staff, among others, to help the displaced with their medical, physical and emotional needs. In Greenville, DHEC staff assisted in the temporary evacuation home set up at Palmetto Expo, providing immunizations, tending to general needs, and overseeing food protection as large numbers of meals were prepared each day. Similar activities occurred in Columbia and Charleston. Evacuees were welcomed, their needs assessed and then they were moved to area hotels. The overall efforts in every community involved public health and emergency response partnerships of local governments, state agencies, hospitals, law enforcement, Salvation Army, Red Cross, and countless community volunteers.

DHEC further aided in the evacuees' transition into new lives by providing free birth certificates to those needing them for school enrollment, identification cards or other benefits and services. Also, the No Shots No School time limit to produce proof of immunization was extended to allow parents more time to secure the necessary documents.

FEMA Registered Evacuees
as of November 23, 2005



DHEC PREPARES, RESPONDS TO COMMUNITY HAZARDS

Public health preparedness for natural disasters, man-made hazards and terrorism involves all areas of DHEC, further demonstrating the close relationship between health and the environment. In 2005, the Centers for Disease Control and Prevention (CDC) and the Health Resources Services Administration contributed approximately $18.9 million to support community and state efforts to prepare for tragic events. These funds helped increase South Carolina's capacity to respond to virtually any threat, whether natural or man-made. For more on emergency response activities, see Pages 6-9.

Accomplishments during the year follow:

- South Carolina was named one of the best-prepared public health systems among the states by the Trust for America's Health organization in their December 2005 "Ready or Not?" report. States were rated on 10 indicators of preparedness in laboratory capabilities, disease outbreak reporting and investigation, and regional hospital emergency response plans. **http://healthyamericans.org**
- DHEC finalized the state **Pandemic Influenza Plan** and will test the plan in exercises throughout 2006. The Pandemic

CAMDEN OUTBREAK TESTS PUBLIC HEALTH RESPONSE

On a Sunday in May 2005, emergency department staff at Kershaw County Memorial Hospital noticed an increase in the number of people coming in with nausea, fever, vomiting and diarrhea. That was the beginning of what would become one of the largest foodborne outbreaks in recent memory.

When hospital staff notified DHEC, a public health team response was set in motion that pointed to a restaurant common to all ill patients. Rapid response led to the restaurant's closure while staff sought to determine the source of illness.

DHEC regional staff interviewed patients and within two hours of the first notification had narrowed the common thread to the restaurant. A second wave of patients who had eaten at the restaurant on a different day also emerged during the following week.

Hospital staff's quick identification of a problem and the rapid response by DHEC allowed for a timely collection of samples, which helped staff narrow down the most-likely source to undercooked turkey. The restaurant voluntarily closed during the investigation, and before reopening received food safety training from environmental health staff.

In all, more than 300 illnesses due to salmonella were confirmed, with 56 hospital admissions and one death. More than 30 staff members, including nurses, doctors, environmental health inspectors and public information coordinators, assisted with the three-week public health emergency.

Teamwork among DHEC central office and regional staff from nursing, environmental health, epidemiology, laboratory and public information and staff from Kershaw County government led to a successful response to a serious public health emergency.

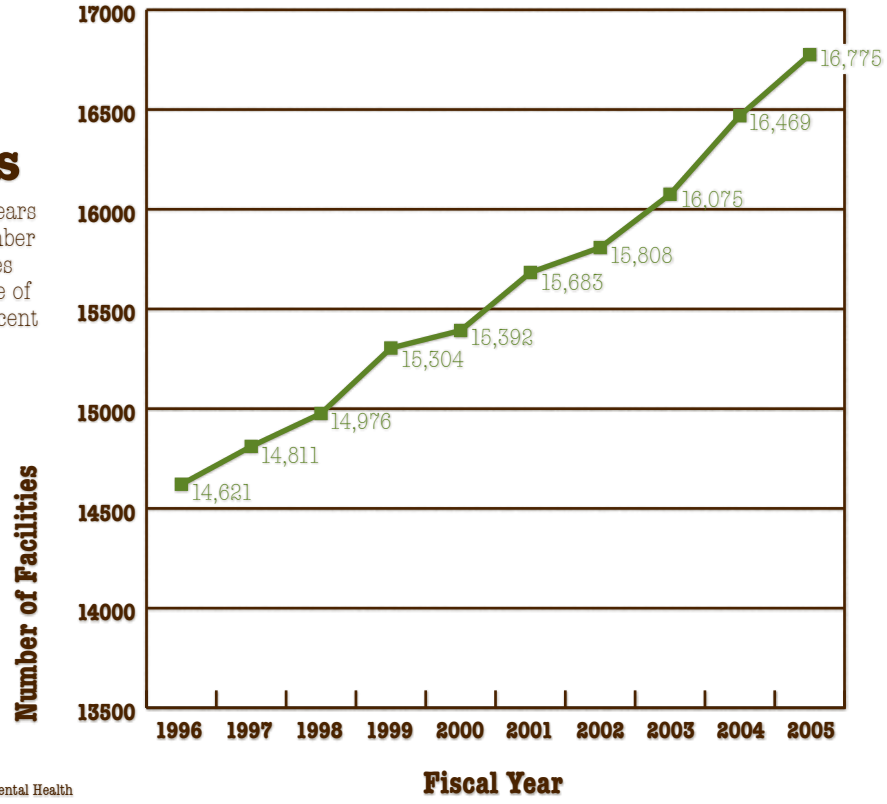
Influenza Plan provides a detailed list of duties and responsibilities that must be carried out in the event that a novel strain of virulent influenza strikes South Carolina. The plan includes coordination of medical personnel, facilities and supplies of vaccine and antiviral medicines. **http://www.scemd.org/library/SCEOP%2005/Annex%2025h.pdf**

- Numerous responses and exercises tested the agency's level of preparedness, including the coordination of medical care for evacuees from **Hurricane Katrina** through the Department of Homeland Security and the Federal Emergency Management Agency (FEMA). For more on help for the evacuees, see Page 5.

- Surveillance and control of communicable diseases and response to other public health emergencies are core public health functions. DHEC continued to strengthen its electronic disease reporting and detection capabilities with the statewide rollout of the Carolina's Health Electronic Surveillance System (CHESS), a secure Web-based disease reporting system that hosted information about the rapid investigation of numerous

Growth of Food Service Facilities

During the past five years (2000-2005), the number of food service facilities has increased at a rate of approximately 1.6 percent (over 200 facilities) per year.



Data source: SC DHEC Environmental Health

"white powder" incidents, respiratory and water-borne illnesses, and more than a dozen foodborne illnesses during the year. For more on CHESS, see Page 52.

- DHEC allied with the United States Postal Service for installation and support of the new Bio-Detection System capable of sensing anthrax hidden inside envelopes. Four systems were placed in strategic mail-handling facilities across the state.
- In response to Homeland Security Presidential Directive – 5, DHEC personnel began training to understand and operate under the National Incident Management System for major events. More than one-third of the agency's staff undertook this training in the first year it was offered.

Efforts continued during the year to increase environmental emergency response capacity:

- Additional equipment was acquired to help monitor radiological events at the state's nuclear facilities or energy from a radiological incident.
- DHEC staff continued to participate in training opportunities and joint exercises with the State Law Enforcement Division and the S.C. National Guard's Civil Support Team to respond more effectively to an incident involving weapons of mass destruction.
- The State Public Health Laboratory continued to increase its bioterrorism and chemical testing capabilities. The Chemical Terrorism Response Laboratory achieved the prestigious Level 1 designation from the CDC, making it one of only 10 such facilities in the country capable of taking on additional responsibilities regarding chemical threats.

Increasing the public health capacity to respond to an outbreak, regardless of its origin, provides resources that have a "dual use" function. Resources are being used to strengthen prevention planning, disease control and overall emergency response.

GRANITEVILLE RESPONSE LINKS HEALTH, ENVIRONMENT

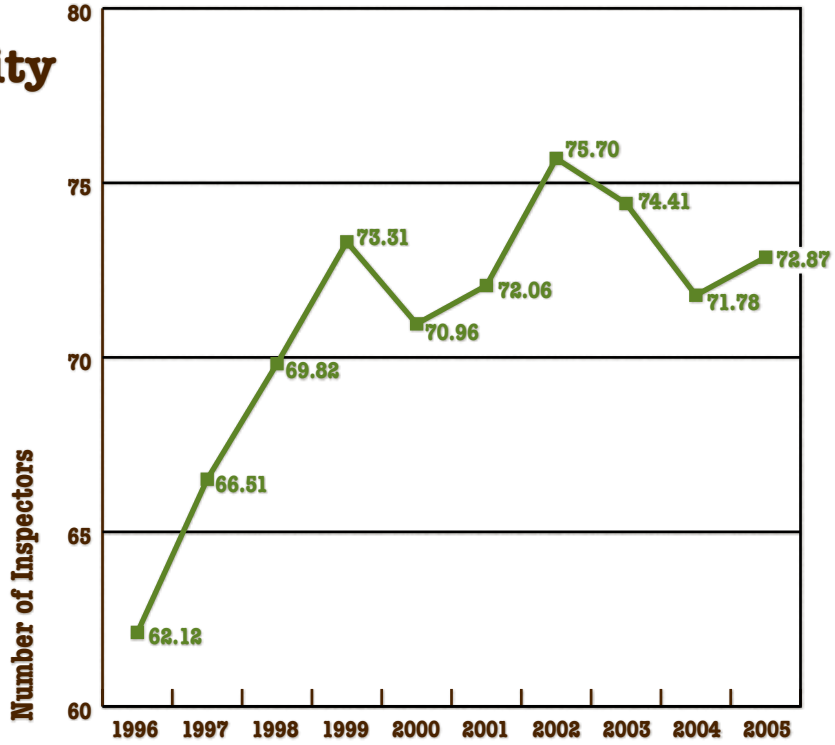
On Jan. 6, 2005, South Carolina experienced one of its most deadly man-made tragedies. A Norfolk Southern train steamed through the small Aiken County town of Graniteville on its way to Charleston. The journey of the two-engine, 42-car train came to an unexpected and disastrous end. The fast-moving train was misdirected onto a spur where it rammed a parked locomotive.

Fourteen cars derailed. Three of those cars carried pressurized chlorine. One tanker ruptured, spilling 60 tons of pure chlorine and releasing a deadly gas cloud into the center of town. This tragic event demonstrates the important ties between public health and the environment in which we live.

A DHEC environmental team was dispatched to the scene to help assess the danger and the

Number of Food Facility Inspectors

During the past five years (2000-2005), the number of food facility inspectors has remained essentially unchanged.



Data source: SC DHEC Environmental Health

COMMUNITY TRAUMA SYSTEMS NEED FUNDING

Each year accidental injuries claim the lives of over 2,000 South Carolinians, the majority of those being children and young adults. For the past decade South Carolina communities have benefited from a voluntary **trauma system** made up of emergency medical service providers, hospitals designated as trauma centers, and rehabilitation centers. This complex system ensures that South Carolina's injured residents and visitors receive the necessary timely and appropriate care that can make a difference between life and death and in being able to resume a normal or nearly normal life. Twenty-three hospitals designated as trauma centers voluntarily commit enormous resources in personnel, medical specialists, equipment, training and administrative oversight to provide this specialized care for the injured. But there is no guarantee that these hospitals will be able to continue to provide these costly resources.

The Trauma Care Act introduced by DHEC in partnership with the S.C. Hospital Association passed unanimously in both the House and the Senate in 2004, and DHEC continued in 2005 to seek legislative funding to sustain the state's trauma system. The infrastructure for the system cannot be established until there is funding to support the system. This year it is hoped that the Legislature will commit funds to support trauma centers so that they can continue to provide this specialized, high level of care.

http://www.scdhec.gov/hr/ems

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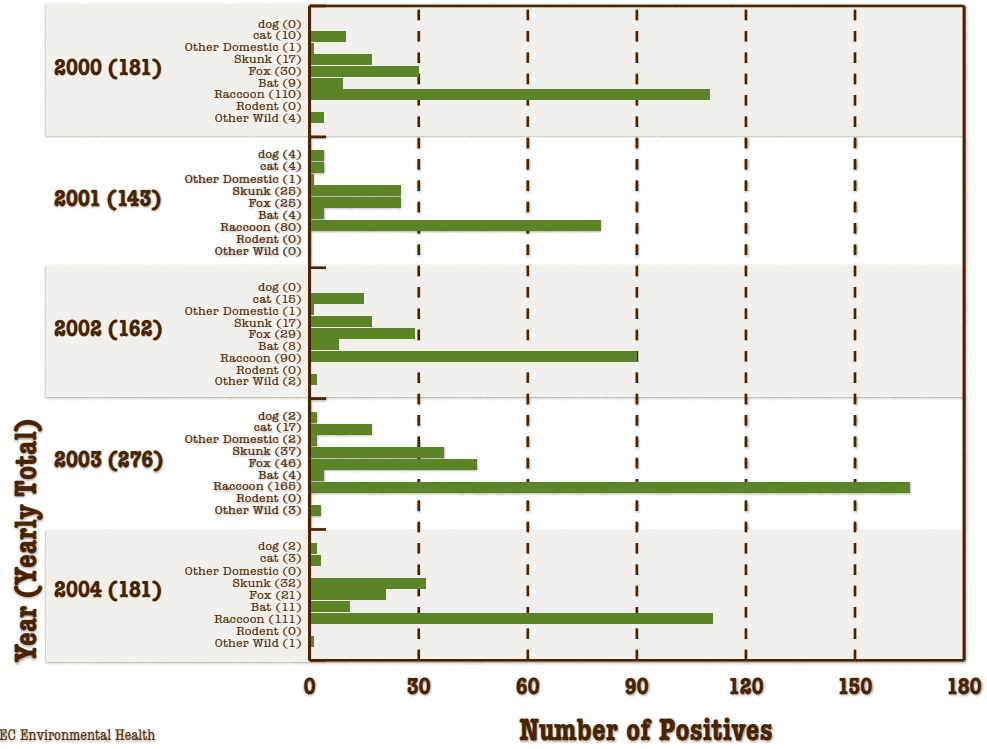
Positive Rabies By Species 2000-2004

Rabies continues to be a public health threat in South Carolina. The majority of confirmed cases are found in wild animals such as raccoons, foxes and skunks. Domestic pets, as well as other warm- blooded animals, are susceptible to the disease. It is very important to maintain current rabies vaccinations to protect domestic animals and the public.



Data source: SC DHEC Environmental Health

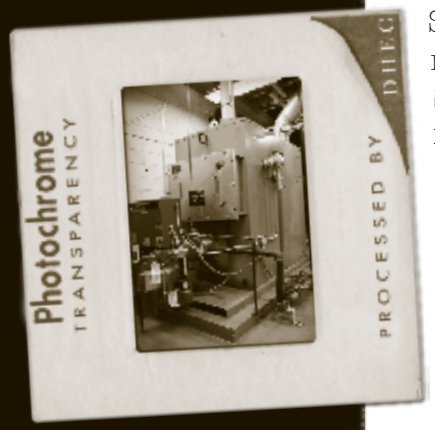
actions needed to protect the small community. Staff entered the "hot zone" during search and recovery and represented the agency's mission in the on-scene Unified Command. DHEC responders were among the first to view the train's damage, assess the spill and learn of the resulting tragedy. Nine people died inside the chlorine haze that covered the area. More than 500 sought treatment from hospitals in Georgia and South Carolina in the hours and days that followed. The evacuation of a one-mile radius forced 5,400 residents from their homes.

When residents were allowed to return home, regional staff traveled from house to house to allay fears and answer questions. On six consecutive days, as many as 30 staff members were in the area to help residents move back into their neighborhoods. Staff tested the area to confirm that there was no chlorine present in houses, businesses or public buildings.

DHEC's public information staff worked hand-in-hand with spokespersons from the Aiken County Sheriff's Office,

COMMUNITY

GREENVILLE COMMUNITY WORKS ON POLLUTION SOURCE



In 2005, DHEC and its Greenville County partners made progress toward improving the Upstate area's air quality in part by converting a problem boiler to natural gas. DHEC had identified the boiler as an emission source of particulate matter during a special investigation that began in late 2004.

Greenville County has two $PM_{2.5}$ (**particulate matter** less than 2.5 microns) samplers – one in Taylors and the other at the Greenville County Public Health Department. DHEC conducted additional monitoring to determine if there were local sources contributing to unexpected concentrations measured during the cooler months. The study is also intended to provide information about the size of the area represented by the sampler. The special investigation adds monitoring for trace gases, black carbon and meteorological conditions.

To ensure residents in the monitoring area were informed about the reasons for increased activity in the area, DHEC staff from Columbia and Greenville met – and continue to meet – with community leaders.

DHEC worked with county and city officials to find funds to convert the boiler, located at the Greenville County Public Health Department, from #2 fuel oil to natural gas. The conversion will reduce the impact of this source of $PM_{2.5}$ and sulfur dioxide in the area.

Also, DHEC is working with EPA to secure funding to work on a voluntary, local action partnership with this community to focus on reducing other emissions and air pollutant concentrations.

Environmental Protection Agency, S.C. Emergency Management Division and Norfolk Southern to provide important information to residents and others monitoring the event. Staff delivered daily briefings to the media near the scene, assisted in the preparation of printed information for returning residents, and helped gather and disseminate information through the State Emergency Operations Center in Pine Ridge.

DHEC health professionals provided medical guidance throughout the incident. Epidemiologists interviewed many of the victims, closely studying the relationships between the victims' location at the time of the accident and their resulting symptoms for future follow-up of long-term health and psychological consequences. Other staff maintained contact with hospitals treating the victims and coordinated necessary medical services such as ambulances and additional bed space.

DHEC's response continued around the clock for 17 consecutive days and throughout the following months. The agency hosted a series of public meetings for residents to voice their concerns about long-term effects on their health and their community. In August, a temporary clinic was established to offer free health screenings for residents exposed to chlorine gas. DHEC began epidemiological studies and created a registry to follow up on long-term health and psychosocial effects.

Proper training, good preparation and appropriate implementation of DHEC's Disaster Response Plan, coupled with help from volunteers from every part of the state, helped the Graniteville community transition from incident to response and recovery.

COUNTIES CONTINUE WORK ON AIR QUALITY

DHEC, the U.S. Environmental Protection Agency (EPA) Region 4 and 45 counties in South Carolina are committed to developing healthy and environmentally sound communities by participating in the ozone Early Action process. As the "local" partner, 45 counties entered into **Early Action Compacts** and agreed to develop and implement air pollution emission reduction strategies best fitting their needs. The goal is to meet new, more stringent ozone standards before the federal government's mandatory date set to meet the requirements. If accomplished, the areas would be in "attainment" and would face no additional requirements.

EPA has named three areas in South Carolina as not meeting the new ozone standard: the Columbia area (portions of Lexington and Richland counties); the Upstate area (Greenville, Anderson and Spartanburg counties); and a portion of York County. Because of York's inclusion in the Charlotte-Rock Hill-Gastonia Metropolitan Statistical Area, the area has an immediate effective date for emission reductions. The other two areas, Columbia and the Upstate, were designated nonattainment, but because of their commitment to the Early Action process, the effective date was deferred.

Each of the remaining counties in South Carolina continues to participate in the Early Action process even though they are currently meeting the new ozone standard. All emission control measures were in place by December 2005; most were in place before April 2005.

South Carolina has more local areas participating than any other state in the nation and has been nationally recognized for its participation level. This process has encouraged

S.C. TURNING POINT HELPS COMMUNITIES IMPROVE HEALTH

S.C. Turning Point is a public-private group that supports community development and planning activities. The state has received funding from the Robert Wood Johnson Foundation since 1999 to fund local initiatives to assess community health through collaborations with government, the business sector and the community. Turning Point is currently working in Orangeburg, Clarendon, Aiken, Georgetown, Pickens and Florence counties. Activities include conducting assessments of community health services and developing health improvement plans. Another goal is to foster leadership and partnership skills with stakeholders and partners. These counties have identified their strengths and are working on their needs. "Mobilizing For Action through Planning and Partnership" is a community-engaged strategic planning tool for improving community health used by the National Association of City and County Health Officials. Plans are being made to implement this process statewide in DHEC's eight public health regions. DHEC has the lead role in facilitating this communitywide systems approach to build a strong and effective local public health system.

http://www.turningpointprogram.org

http://www.naccho.org

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partnerships of local and state governments as well as private citizens, industry and environmental groups. Public awareness of air quality issues has drastically increased as a result of the local participation and responsibility to attain cleaner air sooner. For more on air pollution, see Pages 46-48.

http://www.scdhec.gov/eqc/baq/html/eap.html

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STATE HAS PLAN TO PREVENT, REDUCE OVERWEIGHT, OBESITY

Obesity is fast approaching smoking as the leading cause of preventable deaths in the United States, according to the CDC, and South Carolina took a significant step in fighting obesity in 2005 with a framework for action. The framework, Moving South Carolina Toward a Healthy Weight: Promoting Healthy Lifestyles and Healthy Communities, focuses on policy and environmental change and addresses key objectives in areas such as business and industry, community and faith-based organizations, schools and health care systems and research. The framework was developed by a group of private and public partners that began work in May 2004 and was released in June 2005.

The rates of overweight and obesity in South Carolina are among the highest in the nation. Adult obesity is a risk factor for many health conditions, including diabetes, heart disease, high blood pressure, stroke, gallbladder disease, certain cancers and osteoarthritis. Medical expenses related to obesity in South Carolina currently exceed $1 billion. For more on obesity and overweight, see Pages 19-23 and 34.

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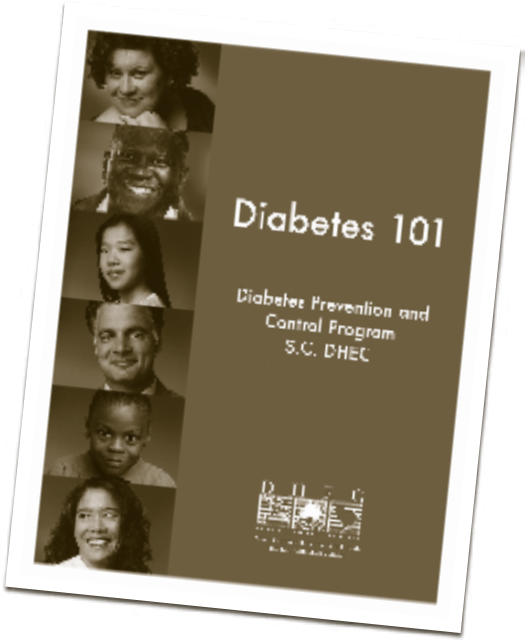
DIABETES AWARENESS, EDUCATION CONTINUE

Diabetes is the seventh leading cause of death (2004) in South Carolina and has immense impact on public health and medical care. DHEC, with CDC funding, continues to promote awareness, prevention and management of diabetes. DHEC emphasizes reducing health disparities among high-risk populations with a work plan based on CDC's National Objectives that focuses on surveillance; clinical measures (foot and eye exams, influenza and pneumonia vaccinations, and



COALITIONS

RADON A HAZARD IN HOMES

Radon is estimated to cause thousands of deaths each year. The U.S. Surgeon General has warned that radon is the second leading cause of lung cancer in the United States and that it poses a significant increased risk to smokers. Radon gas is formed during the natural breakdown of uranium in soil and rock and can build up in indoor air. Radon can be found all over the U.S., but radon levels can be reduced fairly easily and inexpensively in most homes. Nine counties in northwest South Carolina have a higher potential for radon accumulation. Testing is the only way to know if you and your family are at risk from radon. Radon test kits are provided free to South Carolina residents by calling DHEC's radon hotline at 1-800-768-0362.

http://www.scdhec.gov/envserv/radon.htm.

Reggie Massey:
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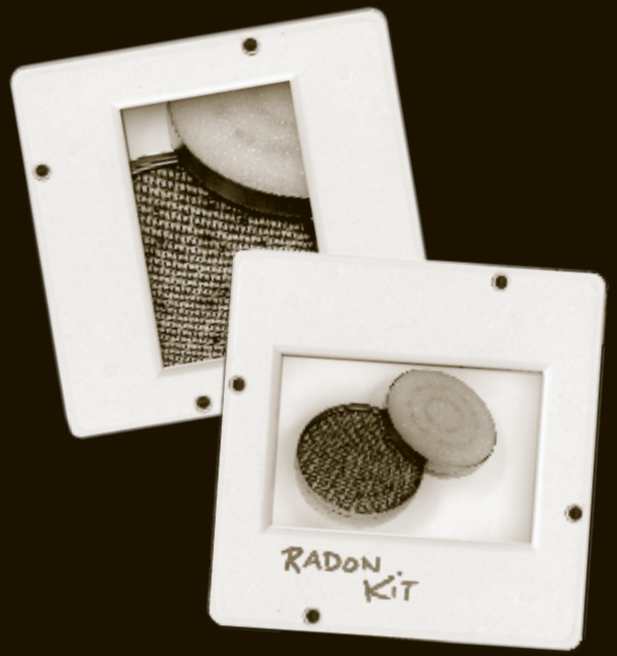
(864) 241-1090



hemoglobin A1c tests); and establishing links to programs addressing risk factors of diabetes. For more on diabetes see Pages 30, 37-38 and 60.

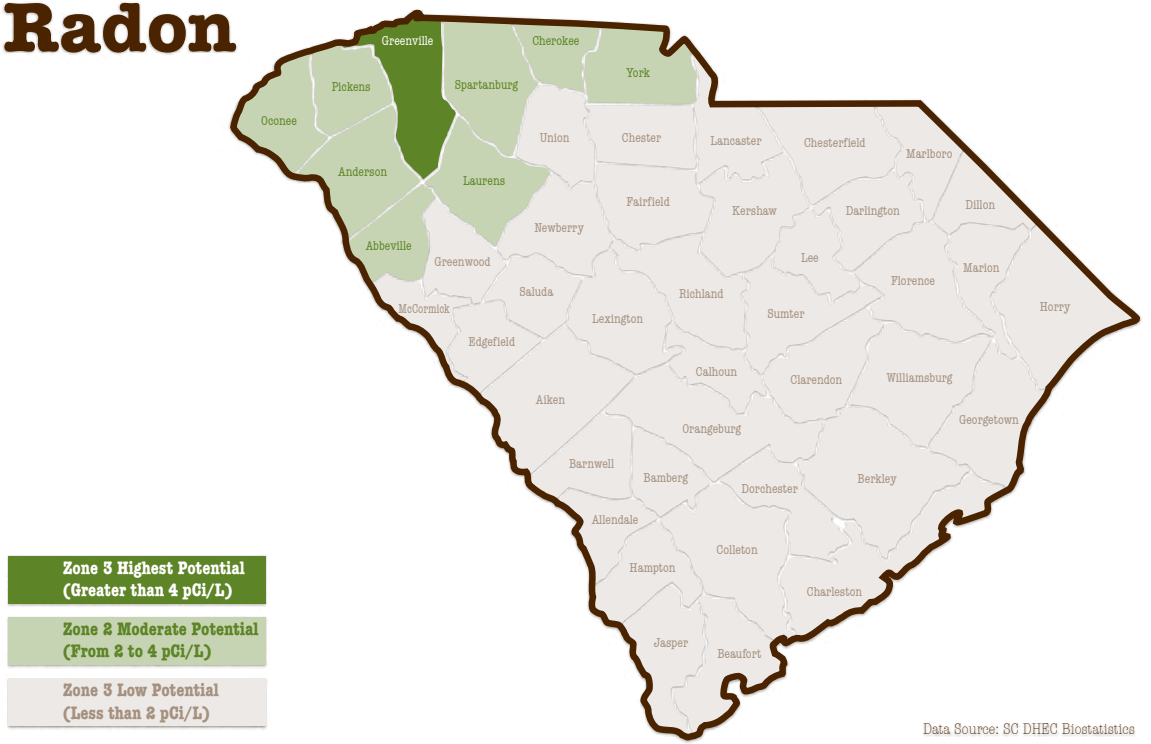
Key program activities over the past year to address the disease follow:

- **Annual African-American Conference on Diabetes** – An annual conference co-sponsored by DHEC and the Diabetes Today Advisory Council has been held every November since 1995 in observance of National Diabetes Awareness Month. The conference targets people living with diabetes, their caretakers, health care professionals and other interested community members.

- **Local Diabetes Coalitions** – There are 31 local diabetes coalitions that include community residents, health professionals and people living with diabetes across the state. DHEC supplies mini-grants to assist the coalitions in developing and implementing plans to address the issues surrounding diabetes in their communities.

- **Diabetes 101** – DHEC and the Diabetes Self-Management Education programs have developed a community awareness curriculum entitled "Diabetes 101" to be used by DHEC providers and trained community leaders across the state upon

Counties and Potential for Radon



Data Source: SC DHEC Biostatistics

DHEC ASSISTS WITH LOCAL WATERSHED PROJECTS

A **watershed** is a specific land area that drains water into a river system or other water body. Everyday activities can affect the water quality within each watershed. DHEC provides a variety of services to help local groups address water quality concerns within their watersheds. Efforts include communicating water quality information, offering technical assistance on local water quality improvement projects, developing presentations on specific water quality issues, participating in educational events, and representing DHEC on committees and work groups. Some of the organizations that have been assisted include: Saluda-Reedy Watershed Consortium; Town of Edisto Beach; Friends of Lake Keowee Society; Great Pee Dee Scenic River Advisory Council; Friends of the Edisto River; Town of Bluffton; Upper Cooper River Special Area Management Plan; Newberry Soil and Water Conservation District; and Black Scenic River Advisory Council.

http://www.scdhec.gov/water/shed/home.html

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request. This program focuses on the risk for diabetes; promotion of awareness of diabetes, signs and symptoms; management and prevention; and addresses knowing your "ABCs"- A1c, blood pressure and cholesterol.

- **Community Health Center Technical Assistance** – Community health centers reach out to medically underserved, minority populations (African-Americans, the elderly, and uninsured and underinsured). Those at greatest risk for diabetes have an enormous need for support in diabetes education and care, but have limited resources. DHEC, in partnership with the S.C. Primary Health Care Association, focuses on eliminating disparities in complications and deaths from diabetes by working with providers to increase levels of prevention testing.

http://www.scdhec.gov/diabetes

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COMMUNITY OUTREACH FOCUSES ON CHILDHOOD UNINTENTIONAL INJURIES

Unintentional injuries kill more children in South Carolina than any other cause of death. From 1994 - 2004, 2,768 children 19 years and under died in South Carolina from unintentional injuries for a death rate of 22.9 per 100,000.

DHEC coordinates efforts in communities to reduce deaths from some of the top causes of unintentional injuries in children through the:

- Child Passenger Seat Program, which provides local child passenger seat distribution and education to reduce unintentional death and injuries of young children. The program has incorporated **Hispanic/Latino** outreach to serve the growing Hispanic population in the state. Additionally, the program promotes seat belt awareness for adolescents;

- Traumatic Brain Injury Emergency Department Surveillance Program, which provides useful population-based emergency department data to support the need and effectiveness of programs such as the Child Passenger Seat Program;

- Traumatic Brain Injury Service Linkage Program, which uses surveillance data to link people of all

PARTNERSHIP CHALLENGE PRESERVES NATURAL RESOURCES

The S.C. Resource Conservation Challenge housed at DHEC is a partnership that promotes new and improved ways for state agencies, colleges and universities, local governments, schools and school districts to recycle, buy recycled products, reduce waste, conserve natural resources and save money. The partnership includes the S.C. Energy Office, the S.C. Department of Corrections, the S.C. Department of Commerce and EPA.

One successful example involved a partnership between the S.C. Department of Transporation (SCDOT) with Lane Construction Corp. They recycled an entire 10-mile section of I-95 as part of a unique construction project. The 10-inch-thick roadway was removed, crushed and reincorporated into the new aggregate. This agency recycled nearly 200,000 tons of concrete from this one project alone. In addition to the environmental benefits, SCDOT also realized cost savings – the existing roadway did not have to be landfilled, new aggregate did not have to be purchased, and trucking costs were reduced.

http://www.scdhec.gov/lwm/RCC/index.html

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ages with traumatic brain injury (TBI) and their families to information about TBI and about services appropriate to their needs;

- Integrated Core Injury Prevention and Control Program, which is being developed to increase the capacity and enhance the existing infrastructure of the S.C. Injury and Prevention Program to effectively address the prevention of injuries and violence in all age groups and to collect, analyze and use injury data;
- Residential Fire Injury Prevention Program, which provides smoke alarm installation and fire safety education to the families of children under 5;
- Child Fatality Advisory Committee, which provides annual statistical studies of the incidences and causes of child deaths in the state. This information is used to develop effective programs to reduce unintentional fatal injuries among children; and
- S.C. Violent Death Reporting System, which collects violent death data to answer the critical questions of when, where, how and why violent deaths occur. The data can be used in planning and evaluating unintentional firearm death prevention programs.

http://www.scdhec.gov/injury

COMMUNITIES PLAN FOR SOLID WASTE DISPOSAL NEEDS

Solid waste management is both an environmental and economic concern. As communities in South Carolina grow, the amount of solid waste generated increases. This solid waste must be managed in a safe manner, to include reuse, recycling, incineration or landfilling. DHEC is committed to having both state and local Solid Waste Management (SWM) Plans in place to enable regulators, local governments, industry and the public to develop policies that encourage the safe disposal and recycling of solid waste in a manner that is economically and environmentally beneficial.

The State SWM Plan is used for planning, permitting and compliance issues. Solid waste permits cannot be issued unless the proposed activity is consistent with the state plan. A draft of the state plan and any changes are publicized to allow the public and the regulated community to comment.

In addition to the State SWM Plan, each county is required to have a local plan that outlines management of solid waste. DHEC offers local governments guidance in addressing their solid waste needs. DHEC also reviews local plans to identify concerns and ensure consistency with the state plan. Local plan reviews also include verifying that local governments allow public input into the planning process through public notices and comments. By working closely with local governments and the regulated community, DHEC can ensure there is adequate capacity to properly manage the solid waste generated by the state's households, institutions, businesses and industries.

http://www.scdhec.gov/lwm/html/min.html

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COMMUNITIES URGED TO PROTECT DRINKING WATER SOURCES

Added protections for **drinking water** sources – groundwater or surface water – continue to be a priority for DHEC. Assessments of drinking water systems and potential sources of contamination have been completed for all federally defined public water systems in South Carolina. The assessments also identify areas around the drinking water sources that need special protection.

The focus is now on developing and implementing local protection plans for source waters. Local governments are urged to form stakeholder groups to develop drinking water protection strategies that best fit local needs. DHEC assists public water systems in this task.

http://www.scdhec.gov/water/html/srcewtr.html

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WORK CONTINUES TO RESTORE BROWNFIELDS

There are many sites in communities around the state where environmental contamination remains from releases and activities that happened years ago. Whether these properties are just an old corner service station with leaky gasoline tanks or a massive former industrial complex that generated unknown volumes of hazardous substances, their presence in a community influences where and how the community grows and develops. Because of concerns about these sites, new businesses and developments are typically built in new areas on the fringes of the community to avoid these properties. This pattern of development leads to increasing sprawl and contributes to the decline of vibrant areas within our towns and cities. In 2005, South Carolina took an additional step to make these sites more attractive to potential buyers.

Under new provisions of the state **Brownfields** law passed by the 2005 General Assembly, nonresponsible parties working in partnership with DHEC can get liability protection from third parties. This provision makes South Carolina only one of a handful of states that protects nonresponsible parties from potential lawsuits over contamination that occurred years before the site was acquired.

In South Carolina, brownfield sites have included small dry-cleaning plants, service stations with rusted-out storage tanks and maintenance bays, old agricultural supply stores, huge shuttered textile mills, early 18th century strip mines, former municipal dumps and landfills, and a wide variety of industrial complexes that produced everything from chemicals to household furnishings and tools. All have generated substances that are persistent in the environment. DHEC strives to restore brownfield sites to productive use through

an aggressive Brownfields/Voluntary Cleanup Program.

Many brownfield sites can be returned to productive use with only a modest capital investment. Communities recoup the costs of restoring brownfields through tax revenues generated by the new occupant. For sites that cannot be cleaned up completely, the environmental and health risks can be managed to allow some reuses of the property. With DHEC's help, sites have been successfully converted to non-polluting industrial uses, thriving commercial centers, recreation complexes and in-fill housing areas, all without endangering the health of people on or near the site. Since the program's inception in 1996, 85 brownfield sites have been restored to productive uses. In the process, more than $75 million in private investment has been spurred from restoring nearly 3,000 acres, and 775 new jobs have been created.

DHEC continues to develop ways to defray the costs of redeveloping brownfield sites. Various tax incentives are available to private enterprises redeveloping brownfield properties, and local governments and nonprofit groups can qualify for low- or no-interest loans from DHEC. These loans can provide capital for governments to restore brownfield properties and then repay the loan with the tax revenues generated from the development. In 2005, DHEC finalized its first loan to the City of Rock Hill. Efforts are also under way to disburse some funds as direct grants to communities to further spur economic development.

Another obstacle comes from not knowing the extent of contamination at these sites. DHEC has successfully obtained EPA funding to investigate these sites as Targeted Brownfields Assessments.

Brownfield sites that are contaminated solely with petroleum compounds are eligible for different funding sources through EPA. Within the last year, funding has been provided to the cities of Anderson and Greenville to resolve environmental issues at 11 sites. Twenty-one additional petroleum brownfield sites throughout the state have been assessed in the past two years. DHEC also helps local governments and community groups administer petroleum brownfield grants they have received directly from EPA. These grants in Spartanburg, Jackson, Charleston and Sumter allow local governments and communities to leverage more resources to effectively address their sites.

http://www.scdhec.gov/lwm/html/vcp_info.html

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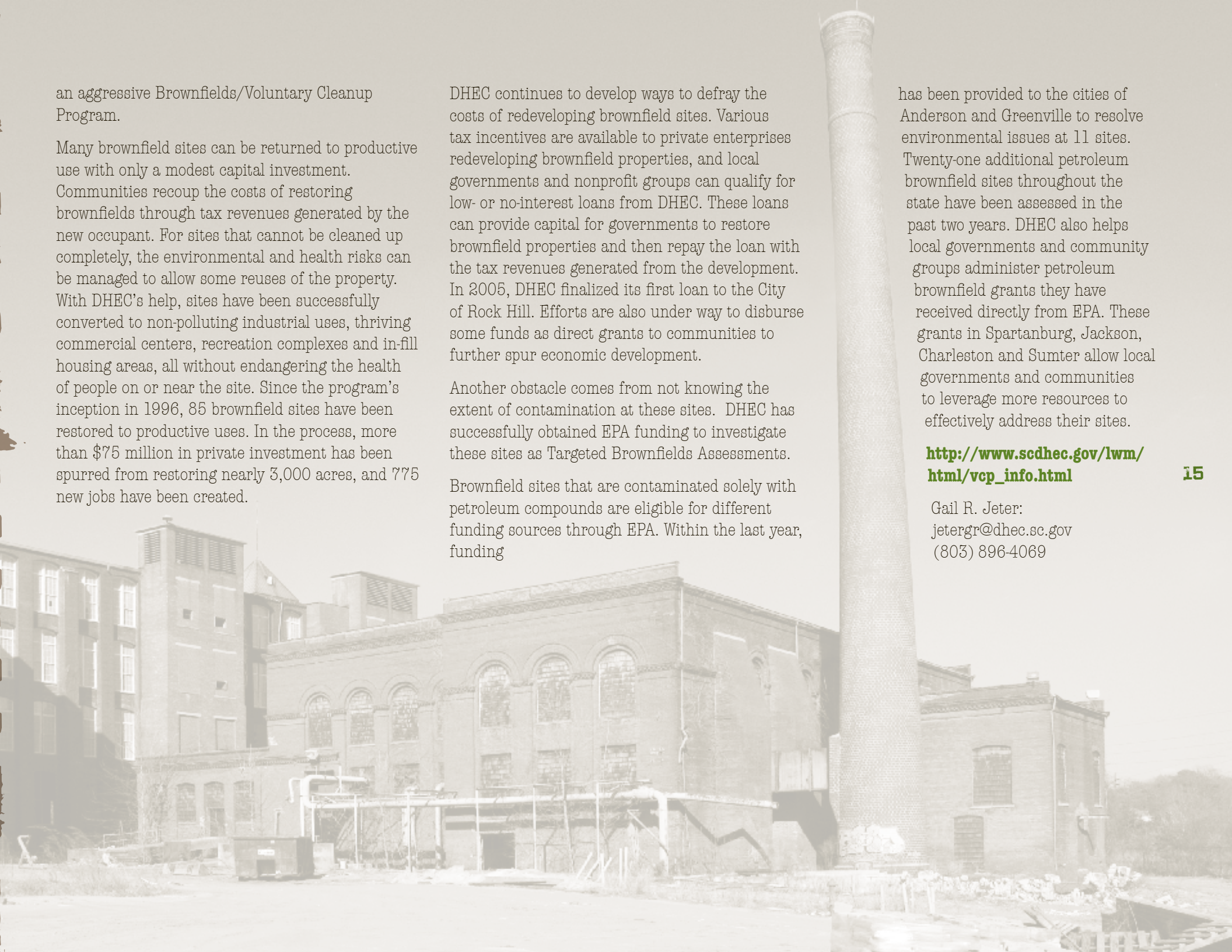

STATES, LOCAL COMMITTEES CONTINUE SHARED WATER PLANNING

Without high quality data, it is impossible to evaluate progress and trends in ambient water quality, assess whether drinking water is meeting standards, develop **Total Maximum Daily Loads (TMDLs)** to improve water quality, or determine the safety of recreational swimming areas. EPA has recognized and uses South Carolina as a model to other states for its monitoring program. However, the need for increased data to meet many needs, coupled with decreasing resources for monitoring programs, continues to present a challenge.

Saltwater intrusion into freshwater aquifers is a potential problem in many coastal areas. South Carolina is currently experiencing saltwater intrusion into the Upper Floridan aquifer system along northern Hilton Head Island from the significant pumping in Savannah, Ga. Georgia's Environmental Protection Division and DHEC have been studying this area for the past five years. Data collection is almost complete, and resource management options are now being explored.

The **Governor's Water Law Review Committee** has developed recommendations concerning water preservation and management. South Carolina and North Carolina have currently formed bistate commissions in two river basins to address and advise governments on water issues of mutual interest. The governor has also appointed a committee to work with a similar committee in Georgia on Savannah River issues.

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DHEC FOCUSES ON IMPAIRED WATER BODIES

Improved water quality of impaired rivers, lakes and streams continues to be a DHEC priority. Section 303 of the Clean Water Act (CWA) established TMDLs to reduce water pollution in **"impaired" waters**, those water bodies where water quality standards are not being met. A TMDL contains the reductions needed to meet the standards, including a margin of safety and considering seasonal variations, and allocates those reductions among the sources of water pollution in the watershed. DHEC must develop TMDLs for all South Carolina waters listed on the 303(d) impaired waters list. DHEC uses federal CWA Section 319 funds to assist with TMDL development and implementation. More than 200 TMDLs have been approved, 80 more are under review, 25 are currently under development, and 56 are being implemented. As South Carolina grows, the increased amount of stormwater, industrial wastes, business wastes, and nonpoint source (runoff) water pollution entering our water bodies will be an increasing challenge. For more on impaired waters, see Pages 43-46.

http://www.scdhec.gov/water/html/tmdl.html.

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ASSISTANCE OFFERED TO WASTEWATER FACILITIES

DHEC has undertaken a pilot program to provide compliance assistance to small community and municipal **wastewater treatment facilities** at risk for future non-compliance with regulatory requirements. Staff now spend less time at facilities that typically stay in compliance and more time working with at-risk facilities. Staff time saved – about 128.5 workdays – is used to assist these facilities. Activities have included developing a self-assessment tool for facilities to determine their compliance status, additional on-site technical assistance visits, and a free, one-day workshop to discuss business, financial and infrastructure planning issues.

New water systems must be viable

"Capacity development" requires that any new public water system show technical, managerial and financial capability before getting a permit to operate. Proposed new water systems will be permitted only if they can show that they have the planning in place to be viable. This decreases the number of public water systems that are unable to meet state and federal regulations.

Recognizing that small water systems need the most assistance in preparing their business plans, DHEC set aside funds from the **Drinking Water State Revolving Fund (DW SRF)** to provide such assistance. DHEC completed a five-year contract with a private company to provide technical assistance to these systems. This contract gave priority technical assistance to small systems with unsatisfactory ratings on their most recent inspection. Fiscal management was found to be one of the weakest areas among the state's small public water systems. DHEC has set aside funds from the DW SRF to help fund a DHEC technical assistance team to continue working with small water systems. The team consists of an accountant, an engineer and a certified water treatment and distribution system operator.

The State Revolving Loan Fund program offers a special one percent interest rate to encourage existing viable water systems to take over ownership and operation of failing water systems. In many cases grants are needed to make these mergers work; however, grant funds are scarce and there are a lot of systems competing for them.

http://www.scdhec.gov/eqc/water/html/srf.html

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ONGOING CHALLENGES, NEW APPROACHES

- **Public health preparedness** for natural disasters, man-made hazards and terrorism continues to be an agency priority. Testing the state's pandemic flu plan will put South Carolina in a better position to know its response needs should a large-scale disease outbreak occur.
- DHEC continues to work with communities on their **air quality** issues, helping them find problem pollution sources and developing ways to eliminate them.
- Policy and environmental change will be the focus of DHEC's efforts to address **overweight and obesity**. A new state framework will guide efforts in key areas of business and industry, community and faith-based organizations, schools and health care systems and research.
- A work plan to continue promoting awareness, prevention and management of **diabetes** emphasizes reducing health disparities among high-risk populations.
- DHEC coordinates efforts in communities to reduce deaths from some of the top causes of **unintentional injuries** in children through seven initiatives.
- As the state grows, **solid waste disposal** needs also grow. DHEC continues to work with communities to plan for future solid waste needs.
- Protection of **drinking water sources** is critical. Technical assistance is offered to communities to help them identify potential sources of contamination and reduce the threat to clean drinking water.

ADDITIONAL RESOURCES:

National Association of City and County Health Officials
http://www.naccho.org

National Healthy Communities programs
http://www.ncl.org/cs/services/healthycommunities.html

U.S. EPA Brownfields Cleanup and Redevelopment
http://www.epa.gov/swerosps/bf/index.html

U.S. EPA Indoor Air-Radon
http://www.epa.gov/radon/

COMMUNITY

Improve the Quality and Years of Healthy Life for All

Individual lifestyle changes can improve health, but policies that promote health also provide an environment that encourages healthy behaviors. Walking and biking trails, no-smoking policies and healthy choices on menus in schools all can reduce the prevalence of overweight and chronic diseases like diabetes and heart disease. South Carolina has taken a significant step to improve children's health with the Student Health and Fitness Act of 2005, which establishes physical education, school health services and nutritional standards for students in kindergarten through fifth grade. A growing senior population also can benefit from community initiatives that promote safe, senior-friendly housing in neighborhoods designed with their needs in mind.

HEALTH POLICY, ENVIRONMENTAL APPROACHES CAN IMPROVE HEALTH

In addition to individual measures to maintain a healthy weight, changes in health policy and the environment can be instrumental in improving health. Some proven and promising approaches include communitywide campaigns, creating or improving access to places for physical activity, workplace programs, transportation policy and infrastructure changes to promote non-motorized transit, and better land use planning.

DHEC supports the Governor and First Lady's **Healthy SC Challenge**, America on the Move and the S.C. YMCA Shrinkdown as three promising communitywide campaigns. Healthy and Whole and Soulfully Fit are two faith-based programs in the state that promote physical activity and healthy eating through social support. Studies show that creating opportunities to access places for physical activity is effective in getting people to exercise more. Creating walking trails, promoting active transportation by building bike and pedestrian facilities, such as sidewalks and bike lanes, or providing access to nearby parks and recreation facilities are measures that can increase physical activity.

Since 58.6 percent of people in South Carolina are employed, the workplace is an ideal setting for increasing health awareness and prompting behavior changes. Workplace policies that support healthy behaviors can be instrumental in helping employees make healthy choices. DHEC has adopted health policies that promote healthy food choices at work, a smoke-free environment and physical activity. DHEC's **Capital Health** is an innovative **work site wellness** program to make physical activity more accessible to employees through policy changes, walking routes, and educational and exercise programs offered during the workday.

Transportation policy and infrastructure changes to promote non-motorized transit also show promise in health improvement. DHEC works with state and local governments to promote changes that support safe walking and biking. There also is a need to improve community design through land use and zoning codes to make walking and biking safer and more convenient. DHEC is working with nontraditional partners, such as the S.C. Department of Transportation, to make changes that promote non-motorized transit. Partnerships like these can create positive changes in bike and pedestrian opportunities and make active living achievable.

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OBESITY A RISK FACTOR FOR CHRONIC DISEASE

Physical inactivity and unhealthy eating can lead to **obesity**. Adult obesity is a risk factor for many health conditions, including diabetes, heart disease, high blood pressure, stroke, gallbladder disease, certain cancers and osteoarthritis. These diseases will continue to increase costs to the health care system. Obesity is fast approaching smoking as the leading cause of preventable deaths in the United States, according to the Centers for Disease Control and Prevention (CDC).

Good eating habits and regular physical activity are necessary to achieve and maintain appropriate weight. Eating at least five servings of fruits and vegetables a day and including a variety of colorful fruits and vegetables at every meal and snack can reduce the risk of many chronic diseases. Reducing the amount of sugar and salt and limiting saturated fats can also improve health outcomes. A combination of diet, physical activity and changes in behavior is the best individual approach for managing weight.

The rates of overweight and obesity in South Carolina are a serious public health problem, affecting 61.3 percent of the adult population in 2004. Only 22.3 percent of South Carolinians eat the recommended number of fruits and vegetables per day, according to the 2003 S.C. Behavioral Risk Factor Surveillance System Survey (SC BRFSS). Fifty-four percent of South Carolinians do not get enough physical activity or are totally inactive, according to the 2004 survey. Medical expenditures related to obesity in South Carolina topped $1 billion in 2003.

African-Americans and Hispanics are at higher risk for overweight and obesity. Women and people of low socioeconomic status within minority populations are also disproportionately affected. Cultural factors that influence dietary and physical activity behaviors are reported to play a major role in the development of excess weight in minority groups. With a state population makeup of 30 percent African-Americans and a growing Hispanic population, the burden of obesity is expected to increase unless preventive measures are taken to address this problem. For more on minority health issues, see Pages 36-41. For more on DHEC's efforts to reduce overweight and obesity, see Pages 21-23.

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TOBACCO LARGEST CAUSE OF PREVENTABLE DEATH

Tobacco use is the single largest cause of preventable premature death in the United States. It kills more people each year than alcohol, AIDS, motor vehicles, homicide, illegal drugs and suicide combined.

Smoking has declined slightly in South Carolina over the past three years. S.C. ranked 12th in the nation for smoking prevalence in 2004, an improvement from 2003 when S.C. ranked 11th. The prevalence of smoking among adults age 18 years and older in South Carolina was 24.3 percent in 2004, compared with 25.5 percent in 2003 and 26.6 percent in 2002. The smoking prevalence was highest among Hispanics and lowest among African-Americans. Among adults who smoke, 56.9 percent had tried to quit sometime within the past 12 months, according to the 2004 S.C. BRFSS.

DHEC promotes a number of policy changes and individual approaches that are effective or show promise in reducing illness and death caused from smoking and exposure to environmental tobacco smoke. Smoking bans and restrictions have been proven to reduce the number of cigarettes smoked each day and increase the number of smokers who quit. Interventions that increase the price for tobacco products, such as a cigarette tax, are effective both in reducing the number of people who start using tobacco and increasing the number who quit. Mass media campaigns show strong evidence of effectiveness in reducing tobacco use initiation when used with other actions and can reduce consumption of tobacco products.

ENVIRONMENTAL TOBACCO SMOKE ALSO TAKES HEALTH TOLL

Research shows that more children and adolescents will start smoking at early ages if they are exposed to **environmental tobacco smoke (ETS)**, compared with those not exposed. Based on the 2005 SC YTS, 60.7 percent of middle school students and 70.9 percent of high school students are exposed to secondhand smoke (reported being in a room or riding in a car with someone who was smoking on one or more days during the seven days preceding the survey). Moreover, each year 240,000 South Carolina youth are exposed to secondhand smoke at home.

CDC estimates that each year in South Carolina, from 630 to 1,120 adults, children and babies die from exposure to secondhand smoke.

The CDC recommends smoking bans and restrictions to reduce exposure to ETS. DHEC promotes local smoking bans and restrictions that can reduce exposure and can result in both reducing the number of cigarettes smoked each day and increasing the number of smokers who quit. In particular, bans and restrictions in schools are effective for adolescents. Efforts are ongoing in cities around the state to disseminate information on tobacco smoke hazards through partnerships with local public health department risk reduction staff, local coalitions and other organizations. DHEC also partners with key organizations to identify and work with African-American businesses and Historically Black Colleges and Universities to survey existing smoking policies. Efforts also include promotion and advocacy to strengthen smoke-free policies. Ongoing initiatives include working with health care providers and systems as well as the Tobacco Intervention and Prevention Strategy program on the First Breaths project, which addresses tobacco smoke issues with pregnant and postpartum mothers.

Strategies that provide reminders and education to health care providers have also been proven effective, whether or not patient education is included. Unfortunately, only 50-60 percent of users receive advice to quit from a health care provider. Identifying tobacco users and giving information to health care providers about the risks and dangers of tobacco to pass along to their patients is effective in reducing tobacco use. DHEC is developing partnerships to implement this approach in South Carolina through the U.S. Public Health Service Clinical Practice Guideline for Treating Tobacco Use and Dependence. The guideline includes a five-step clinical protocol to help health care providers advise and counsel smokers to quit.

Telephone counseling and support to help tobacco users quit is an approach that holds promise. Telephone counseling shows evidence of effectiveness when it is included in a multicomponent strategy to help smokers quit. Quit for Keeps is a telephone counseling smoking cessation program that is available at no cost to any smoker in South Carolina who is ready to quit. For information on youth tobacco use, see Pages 24 and 65.

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UNHEALTHY BEHAVIORS IN CHILDHOOD LEAD TO UNHEALTHY ADULTS

The **unhealthy behaviors** practiced by adults often have their beginnings in childhood. Some of these unhealthy behaviors – tobacco-use, lack of physical activity and poor nutrition – greatly increase a child's risk for high blood pressure, diabetes, sleep apnea and other health problems. As children become adults, these unhealthy behaviors increase the risk not only of these conditions developing and/or worsening, but also can result in cardiovascular disease, orthopedic problems and other unhealthy conditions, even cancer.

Physical inactivity and poor nutrition have a tremendous impact on overweight. Childhood **overweight** is now a modern-day epidemic. (There is no obesity designation for children, only "at-risk for overweight" and "overweight.") The prevalence of overweight among children ages 6 to 11 has more than doubled in the past 20 years, and for adolescents ages 12 to 19, it has more than tripled. Type 2 diabetes, previously considered an adult disease, is being diagnosed more frequently in children. Addressing health promotion and chronic disease prevention at an early age is critical to reversing these trends.

Physical activity, nutrition getting more attention in schools, communities

Despite all the benefits of **physical activity**, most school-age children in this country are sedentary. Only one in four gets the recommended amount of physical activity each day (30 minutes of moderate activity or 20 minutes of vigorous activity). Given that regular physical activity will help young people stay healthier, it is important to know what strategies work best to increase physical activity.

The following practices are recommended by the CDC and used by DHEC. When appropriate, a description of the strategy and a South Carolina-related illustration are provided.

MEDICAL HOMES NETWORK GROWING

One recent development in health care in South Carolina is a new managed care initiative, the Medical Homes Network (MHN) program. MHNs are a localized approach to managed care consisting of local physicians who have enrolled as MHN providers. MHNs are specific to Medicaid, and in addition to serving as a medical home, they offer case and disease management.

There are currently three MHNs in South Carolina. The first MHN, Upstate Carolina Best Care, began operating in October 2004 in Anderson, Oconee and Pickens counties. Located in Horry, Marlboro, Georgetown, Williamsburg, Marion and Dillion counties, PhyTrust began operating in early 2005. A third MHN, Community Health Solutions (CHS), began services in Aiken, Barnwell, Bamberg, Allendale and Hampton counties in early Spring 2005.

DHEC and the MHNs have the common goal of ensuring that families have an accessible medical home that either provides or coordinates their health care needs. DHEC is working with the MHNs in a variety of ways to help achieve that goal. Medical homes through MHNs are increasing as PhyTrust and CHS have expanded into other counties throughout the state. The number of families who have a medical home through this initiative is rapidly growing.

- ***Enhanced physical education classes in schools***

More than 95 percent of South Carolina's 5- to-7-year-olds spend six hours or longer each day in school. In 2005, South Carolina legislators recognized that schools are key partners for positively influencing the health habits and attitudes of children and adolescents. The Student Health and Fitness Act of 2005 was passed by the General Assembly and signed by Gov. Mark Sanford June 1, 2005, establishing physical education, school health services and nutritional standards for students in kindergarten through fifth grade. DHEC has worked with decision-makers to support the act by partnering with various organizations including the S.C. Governor's Council on Physical Fitness and the S.C. Coalition for Promoting Physical Activity. Beginning with school year 2006-2007, school boards must establish health and nutrition policies for their elementary schools designed to limit vending sales and sales of foods and beverages of minimal nutritional value at any time during the school day. The health curriculum for students in kindergarten through fifth grade must include a weekly nutrition component. Physical education and physical activity will increase from 60 to 90 minutes per week, up to 150 minutes over the next three years. The act also provides funds for nurses in public elementary schools.

Around the state, DHEC staff are working on a variety of school-based nutrition and physical activity programs. One of the most widely used is **Color Me Healthy (CMH)**, a national award-winning curriculum designed to reach preschoolers by providing innovative and interactive learning opportunities focusing on the importance of healthy eating habits and physical activity. Several components are designed to also reach parents/caregivers and child care providers. There are now 22 CMH regional educators who have provided training to more than 380 South Carolina child care providers and preschool teachers. More than 7,600 children have participated in the CMH curriculum. (There may be a cost for materials. Please call 803-545-4490 for more information).

http://www.scdhec.gov/health/chcdp/schools/index.htm

- ***Creating or improving access to places for physical activity***

Studies have shown that creating or improving access to places for physical activity is effective in getting people to exercise more. Each year, the S.C. Governor's Council on Physical Fitness, the S.C. Coalition for Promoting Physical Activity and DHEC partner to offer Walk to School Day and Safe Routes to School grants to schools around the state. The Walk to School Day grants are designed to increase awareness about the importance of being able to walk

or bike to school and the condition of the walking and biking facilities that lead to the school. The Safe Routes to School grants are designed to help schools take the next step to actually improving students' and staffs' ability to walk or bike to school. Walking or biking to school also improves air quality by reducing the amount of traffic and vehicle emissions. In 2005, approximately 48,000 students and 100 schools participated in Walk to School Day events. For more on student and school activities to improve air quality, see Page 46.

http://www.scdhec.gov/health/chcdp/physical_activity/index.htm

- ***Nutrition***

Less than 18 percent of South Carolina youth ate five or more servings of fruits and vegetables during the past seven days, according to the 1999 Youth Risk Behavior Survey, the most current year of available data. Fruits and vegetables are an important source of vitamins and minerals children need each day. More than 25 percent of low-income children in the state between 2 and 5 years of age are overweight or at risk of becoming overweight, according to the 2003 Pediatric Nutrition Surveillance System, the most current year of available data.

DHEC has identified the **Color Me Healthy** curriculum as an initiative to address the health of South Carolina's children. Partnerships have been established with organizations such as Clemson University Cooperative Extension Service, Congregational Nurses Network, Head Start, S.C. First Steps and faith-based sites. Partnering with the S.C. Early Childhood Education Association and the Center for Child Care Career Development for the S.C. Child Care Training Registry has resulted in child care providers being eligible to receive four hours of continuing education credit for CMH training.

Introducing children to the concepts of healthy nutrition and physical activity behaviors so that they adopt healthier lifestyles earlier in life is essential to improving the health of our children. DHEC, through a Food Stamp Nutrition Education grant from the U.S. Department of Agriculture, collaborated with the University of South Carolina's Department of Theater and Dance to teach schoolchildren in kindergarten through third grade about healthy eating and physical activity through interactive live theater. In 2005, approximately 7,800 South Carolina schoolchildren attended a performance of Taking Charge in Meadowland. After viewing the play, the children demonstrated a significant increase in their knowledge of the recommended servings of fruit and vegetables, healthy snacks, foods recommended for healthy bones, and the requirement for daily physical activity.

http://www.scdhec.gov/health/chcdp/nutrition/index.htm

MASS MEDIA CAMPAIGNS EFFECTIVE IN REDUCING YOUTH SMOKING

RAGE AGAINST THE HAZE

Smoking prevalence among adolescents – the age at which most smokers take up the habit – rose dramatically in the early 1990s. Yet 70 percent of adolescents who smoke want to quit completely. Mass media campaigns show strong evidence of effectiveness in reducing initiation of tobacco use when combined with other actions, such as increasing the excise tax. Mass media campaigns can also decrease consumption of tobacco products and increase tobacco-use cessation.

The **Rage Against the Haze** youth movement against tobacco use employs marketing efforts to motivate young people to avoid tobacco use. Although South Carolina does not have an ample budget to use mass media campaigns including television and radio, it still operates a cutting-edge movement and campaign using word-of-mouth marketing as its primary strategy. Young people are empowered as peer leaders and talk to other youth about tobacco use, marketing practices used to encourage tobacco use and strategies to avoid them. The results have demonstrated a successful campaign with enthusiastic, active members who take their message to their peers and work for tobacco-free environments on the local level.

http://www.scdhec.gov/health/chcdp/tobacco/index.htm

YOUTH TOBACCO USE DECLINES, BUT STILL A PROBLEM

Smoking among youth has decreased 11.6 percent since 1999. The state's youth smoking rate decreased from 36 percent in 1999 to 24.4 percent in 2004.

Each day, approximately 3,900 young people in the United States between the ages of 12 and 17 initiate cigarette smoking, and 1,500 become daily cigarette smokers. In South Carolina, more than 24,000 youth try cigarettes for the first time each year, and more than 11,000 kids become new, regular (daily) smokers. The CDC estimates that about 98,000 kids who are alive today in South Carolina will prematurely die from smoking.

According to the S.C. Youth Tobacco Survey (SC YTS), the smoking prevalence among high school students was 24.4 percent in 2005, a 32 percent decrease from 36.0 percent in 1999. Among middle school students, the rate of cigarette smoking was 11.2 percent in 2005. The smoking rates for both high school and middle school students in the state are above the national averages for 2004 (22.3 percent for high school and 8.1 percent for middle school), although the differences are not statistically significant.

In 2005, more than one-third of high school students (36.7 percent) and nearly two-thirds of middle school students (61.8 percent) reported never having smoked cigarettes. However, almost one in four students who have never smoked are at risk of starting. Among "never smokers," 23.1 percent of high school and 24.4 percent of middle school students reported their intention to start smoking in the future.

IMMUNIZATION OF PRESCHOOL CHILDREN CHALLENGING

DHEC has moved much of its direct childhood **immunization** efforts to the private sector by establishing and encouraging medical homes for children. DHEC's primary role now is to work with private providers to make sure that children are getting timely and complete immunization coverage. New vaccines continue to be added to a busy childhood and adolescent immunization schedule. Tracking children who have fallen behind on their immunizations so parents can be reminded of the need to stay up to date is a significant challenge throughout the 600 immunization practices across the state. At 77.2 percent, South Carolina is just above the U.S. average for estimated vaccination coverage among children 19-35 months of age, according to the CDC's 2004 National Immunization Survey. The Healthy People 2010 goal for the nation is 90 percent coverage.

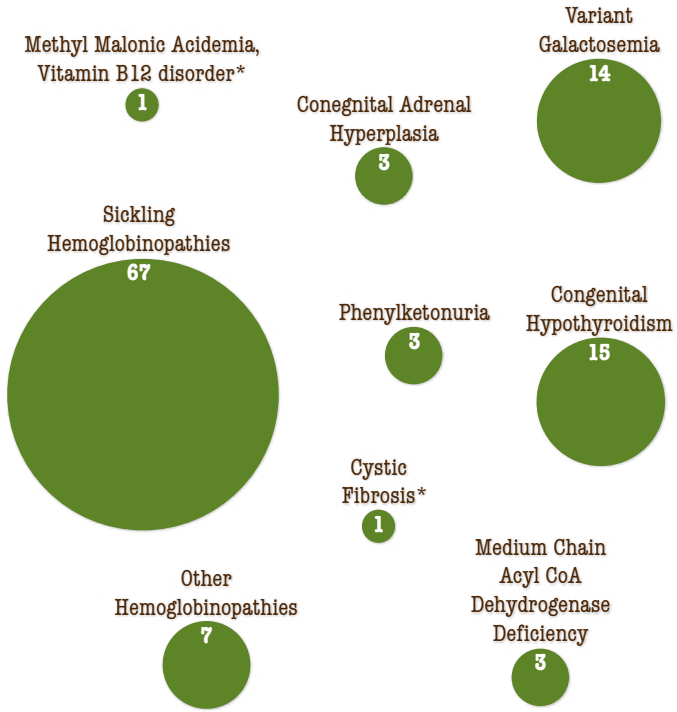
http://www.scdhec.gov/HS/diseasecont/immunization/child_vacc.htm

NEWBORN METABOLIC SCREENING UPDATE

Through newborn screening, all infants are tested at birth for certain disorders that cause mental retardation, abnormal growth and even death. South Carolina's screening test panel is one of the most comprehensive in the nation, including 27 of 28 core conditions and 18 of 25 secondary conditions recommended by the American College of Medical Genetics. Early diagnosis of these conditions leads to early interventions that improve the health of infants. Tests for other disorders will be added as new screening methodologies are developed.

http://www.scdhec.gov/health/mch/wcs/ch/nbscr.htm

Infants Diagnosed Through Newborn Screening in 2004



* Screening for these conditions began November1, 2004
Data Source: SC DHEC Newborn Metabolic Screening Program, Division of Women and Children's Services
http://www.scdhec.gov/health/mch/wcs/ch/nbscr.htm

FIRST SOUND PROVIDING EARLY IDENTIFICATION SERVICES FOR CONGENITAL HEARING LOSS

Congenital **hearing loss**, if undetected at birth, will typically go undetected until speech and language delays become apparent, usually at 2 to 2 1/2 years of age. At this age, intervention efforts have a limited impact because the critical period for learning speech and language is ending or already passed. As little as a six-month delay in treatment of newborns with hearing loss can impact the child's need for special education versus mainstream education. Thus, early identification and intervention can save the education system approximately $420,000 per child in special education services over the 12 years of his or her education.

First Sound
Newborn Hearing Screening

Because babies can't tell us if they can't hear.

First Sound, South Carolina's Universal Newborn Hearing Screening Program, is charged with meeting the goals of the American Academy of Pediatrics. The goals are for infants to be screened by 1 month of age; if referred, have a confirmed diagnosis by 3 months of age; and receive early intervention services by 6 months of age if hearing loss is identified. As of 2004, hospitals were screening approximately 98 percent of babies before discharge, and 270 babies have been identified with some type of hearing loss. The challenge is the lost-to-follow-up rate, which is consistently around 30 percent because of a shortage of providers, lack of transportation to appointments, low reimbursement rates for services, and missing demographic data. First Sound is working to improve the lost-to-follow-up rate through birth certificate information, developing a parent-to-parent support group for those who have children with hearing loss, and working on improving reimbursement issues.

http://www.scdhec.gov/health/mch/cshcn/programs/firstsound.htm

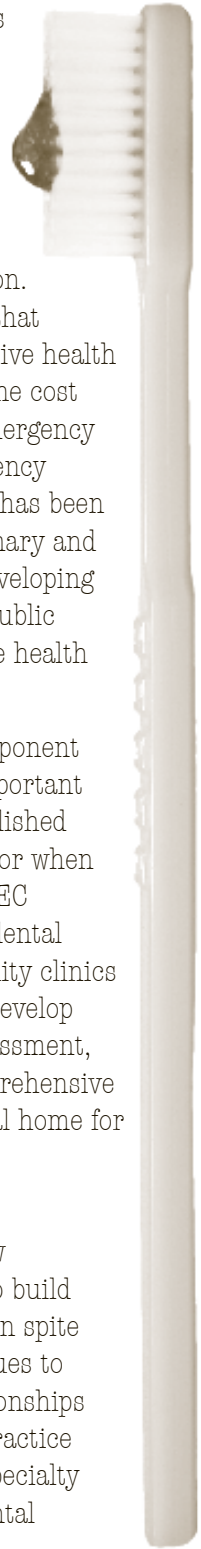
POSTPARTUM NEWBORN HOME VISITS LACK STAFF

Postpartum newborn home visits to the Medicaid population in South Carolina can make a positive difference in outcomes for newborns and are a cost-effective element of health care for this population. Under this program, Medicaid pays for a post-hospital-discharge home visit to assess the environmental, social and medical needs of Medicaid-eligible infants as well as the family planning and other maternal health assessments and education needs of the mother. In home visits, nurses can identify infant problems early, such as poor weight gain, heart murmurs that develop after the first few days, or blood pressure problems in the mother. Nurses also can help the family find a medical home for the infant and stress the importance of well child care visits and immunizations. They also can assure that postpartum mothers receive their six weeks checkup and obtain family planning guidance. The state's target is for 90 percent of all Medicaid newborns discharged from a hospital to receive a newborn home visit within three days. In 2004, DHEC and other providers were able to provide visits to only 46 percent of this population – down from 51 percent in 2003 – primarily because of DHEC's critical nursing shortage.

http://www.scdhec.gov/hs/mch/wcs/ch/nbhv.htm

FAMILIES CONTINUE TO NEED MEDICAL, DENTAL HOMES

All families should receive ongoing comprehensive care within **medical and dental homes**. These homes connect families with a primary care provider, such as a doctor or dentist, and wrap-around public health services, such as social work, nutrition, nursing and health education. This improves the chances that families will receive preventive health care services and reduces the cost burden of families using emergency departments for non-emergency health care services. DHEC has been moving from providing primary and specialty medical care to developing partnerships with private/public medical providers to provide health care services to families.



Oral health is a critical component of a family's health. It is important that a dental home be established early in a child's life (age 1 or when the first tooth appears). DHEC partners with medical and dental providers, schools, community clinics and many other groups to develop a network for the early assessment, triage and referral for comprehensive treatment to ensure a dental home for everyone in South Carolina.

As the structure of health care constantly evolves, new opportunities allow DHEC to build and expand **partnerships**. In spite of challenges, DHEC continues to develop and maintain relationships with pediatricians, family practice physicians, obstetricians, specialty physicians, dentists and dental hygienists. Links with community providers, schools and other organizations have been strengthened through collaboration. By joining forces with other health care providers, DHEC has forged initiatives to improve access to and quality of services. After a period of decline, partnerships with the state's medical and dental providers are increasing and improving the ability of all providers to serve families.

http://www.scdhec.gov/health/mch/oral/index.htm

EARLY AND CONTINUOUS PRENATAL CARE IMPROVES BABIES' HEALTH

Early and continuous **prenatal care** is important for all pregnant women for their own well-being as well as that of their growing fetus. While the rate of first trimester entry into care improved in the 1990s, more recent trends indicate that the percent of all women entering prenatal care during the first three months of pregnancy has been decreasing. In 2004, 69 percent of all pregnant women began their prenatal care in the first trimester (76 percent for white and 59 percent for black women and women of other racial minorities). The state is far from the Healthy People 2010 goal for the nation of 90 percent. The state is also far from the 2010 goal of 90 percent of pregnant women receiving adequate prenatal care (an appropriate number of visits). In 2004 in South Carolina, 72 percent of all pregnant women received adequate care (76 percent for white women and 65 percent for black and other women). The greatest challenges in addressing the present trends are that there have been significant

MORE SMILING FACES IN BEAUTIFUL PLACES IMPROVING ORAL HEALTH

More Smiling Faces in Beautiful Places (MSF) is one of six oral health initiatives in the State Action for Oral Health Access Program funded by the Robert Wood Johnson Foundation and managed by the Center for Health Care Strategies. MSF is based on partnerships under the leadership of DHEC.

Through this project, an oral health network of dentists, physicians, nurse practitioners, dental hygienists, public and private health providers, community health centers and churches has been developed in the six pilot counties of Marlboro, Marion, Chesterfield, Hampton, Greenwood and McCormick to increase access to oral health care.

More than 50 medical professionals have received training to provide oral screenings, tooth decay risk assessments, oral health education and preventive care beginning with infants. In addition, more than 125 dental professionals have received training to increase their ability to provide dental care for very young children and children with special health care needs. "Patient navigators," paid lay oral health educators funded through the grant, have successfully developed a system to link medical homes with oral health care providers, provide patients with resources, screen for eligibility in Medicaid or other insurance programs, and arrange patient transportation in the pilot counties.

Education and community outreach efforts have demonstrated success. Patient navigators have delivered oral health education to 4,653 parents, caregivers and children through community agencies and groups such as Head Start, Healthy Start, First Steps, faith groups and day cares.

The Child Care Center Oral Health Training curriculum, based on the Stepping Stones to Using Caring for Our Children and the Bright Futures Guidelines: Oral Health, was approved by the Center for Child Care Career Development, which provides accreditation, training and education for child care providers in South Carolina. Activities and corresponding parent education sheets for young children are included in the training. A lay oral health education program, Building Bridges in Our Community, was conducted with the African Methodist Episcopal Church and other faith communities.

http://www.dhec.sc.gov/health/mch/oral/smiling.htm

budgetary concerns in financing care for the Medicaid population, state agency budget cuts have resulted in a shrinking public health work force, and the opportunities for partnerships between the public and private sector have been curtailed. To impact these challenges, DHEC promotes early and continuous care, including ongoing risk assessment and risk-appropriate care, by working with the S.C. Department of Health and Human Services and its plans for managed care for pregnant women.

http://www.scdhec.gov/health/mch/wcs/mat.htm

TEEN PREGNANCY DROPS

The **pregnancy rate among teens** 15-17 in South Carolina decreased from 38.2 per 1,000 teens in 2003 to 36.6 per 1,000 teens in 2004. From 1996 through 2004, the rate decreased 34 percent for white, 36 percent for black, and 15 percent for other teens. The pregnancy rate for black teens is still considerably higher than for white teens, but encouragingly, the disparity is decreasing over time.

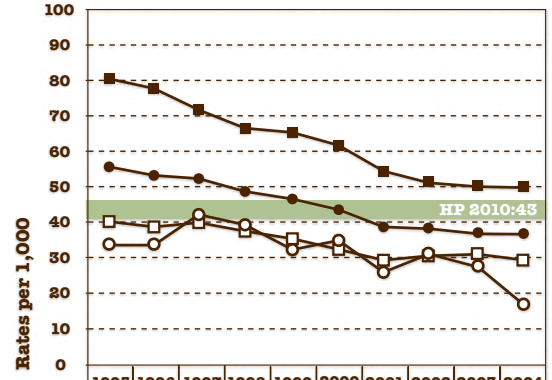
http://www.scdhec.gov/co/phsis/biostatistics

ACCESS TO FAMILY PLANNING HURT BY BUDGET DECLINE

Access to quality family planning services continues to be a priority for DHEC. However, as resources shrink, continuing access at the same level as in previous years is a challenge. Nursing staff is at a critical all-time low. Between 2002 and 2004, DHEC lost more than 31 percent of its nursing work force. Many more nursing positions are being deleted or considered for deletion because of budget deficits in DHEC's regions. Nursing shortages will continue to be a huge problem as many staff plan to retire within the next few years.

DHEC is working with staff to help retain the current family planning caseload. Working with an outside consultant, DHEC identified services and practices that could be reduced or eliminated altogether. For the third year, "open access" clinic schedules, which offer same day or next day client appointments, are being used in many clinics. This new way of

Trends in S.C. Adolescent Pregnancy Rates by Race Ages 15-17



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	40.1	38.6	39.8	37.3	35.0	32.3	29.2	30.2	30.1	29.3
Black	81.7	77.6	71.6	66.3	65.3	61.1	54.2	51.2	51.4	50.1
Other	32.6	32.6	41.0	39.3	31.3	35.2	26.0	30.4	27.1	17.5
Total**	55.5	53.0	52.1	48.5	46.5	43.2	38.6	38.2	38.2	37.0

**Total includes missing race of mother
Data Source: SC DHEC Biostatistics

scheduling appointments addresses the "no show" rates that were generally running at 40 to 60 percent. The "no show" rates in clinics using the open access appointment scheduling have significantly decreased. DHEC will also be looking at forming community partnerships to assure family planning services for all women and men in need.

http://www.scdhec.gov/health/mch/wcs/fp/index.htm

PREMATURITY RATES REMAIN HIGH

Babies born too early (before 37 weeks gestation) are more likely to suffer lifelong consequences or die early and cost society millions of dollars each year in additional hospitalization and medical care. Despite decades of research, scientists have not yet developed effective ways to help prevent premature delivery. In fact, the rate of **premature birth** increased by 35 percent between 1981 and 2004 (9.4 to 12.7 percent). The March of Dimes and DHEC continue to promote a premature birth campaign, Too Small Too Soon, in South Carolina. The goals remain to raise awareness of the problem of prematurity and to decrease the preterm birth rate in the state. Efforts continue to assure that all pregnant women know and understand the signs and symptoms of preterm labor. DHEC continues to promote delivery of the most high-risk infants in Level III hospitals, which have neonatal intensive care units and provide the best chance at a healthy life.

http://www.scdhec.gov/health/mch/perinatal/index.htm

DOMESTIC VIOLENCE AND SEXUAL ASSAULT A PUBLIC HEALTH CONCERN

DHEC has increased its efforts to address **domestic violence**, which continues to be a major public heath concern in South Carolina. There is a strong connection between acts of domestic violence and **sexual assault**. Of people who report sexual violence, 64 percent of women and 26 percent of men were raped, physically assaulted or stalked by an intimate partner. This includes a current or former spouse, cohabitating partner, boyfriend/girlfriend or date.

Key points about the impact of domestic violence and sexual assault in South Carolina are illustrated by the following statistics:

- In South Carolina, there were 39,803 reported cases of domestic violence in 2002 and 35,595 cases in 2003, which is the most current data available.
- The S.C. Coalition Against Domestic Violence and Sexual Assault reports that in 2003, the most current data available, 4,400 women and children were sheltered and 33,785 hotline calls were answered statewide.
- From 2001-2003, the most current data available, 3.6 percent of white respondents and 8.4 percent of black respondents in the Pregnancy Risk Assessment and Monitoring System indicated that they were physically abused during pregnancy. This disparity is consistent with rates in the general population.
- In 2004, 1,720 cases of forcible rape were reported to law enforcement in South Carolina. However, the state's 16 sexual assault centers served 6,470 new primary victims and 5,095 secondary victims.
- Rape is called the most under reported violent crime in America. In a large national survey of American women, only 16 percent of the rapes, approximately one in six, had ever been reported to the police. (Rape in America: A Report to the Nation, National Victim Center, 1993).
- In 2003, the most current data available, South Carolina ranked sixth in per capita killings of women by men. Thirty-six women were killed, a rate of 2.21 per 100,000, which is significantly higher than the national rate of 1.31 per 100,000.
- In 2004, at least 37 women and seven men were victims of domestic violence homicides.
- DHEC demonstrates its commitment to reducing the incidence of domestic violence and sexual assault by having co-sponsored state violence prevention summits in 2004 and 2005, supporting staff in local public health regions on numerous community-based violence prevention boards and grassroots coalitions, partnering with staff of domestic violence shelters and sexual assault prevention and intervention services for training and referral services, and promoting screening for domestic violence risk factors and linking to needed services by public health social workers and nurses.

http://www.scdhec.gov/health/mch/perinatal/womens.htm

Henry J. Kaiser Family Foundation
http://www.kff.org

WHAT YOU CAN DO FOR SENIORS

- Volunteer your time and services for seniors and family caregivers. Families provide 80 percent of all long-term care services. Develop respite services in your community to give family caregivers a much-needed break. Conduct safety audits in seniors' homes to assure no hidden dangers could cause injuries. Provide transportation to seniors. Volunteer for community services aimed at seniors, such as Meals on Wheels.
- Educate seniors in your community about the importance of screening and early detection for arthritis, cardiovascular disease, cancer, diabetes and depression. Screening and early detection can improve quality of life, add years to life and prevent or delay institutionalization.
- Encourage seniors to get a yearly flu shot and a pneumonia vaccination.
- Help seniors to stay physically and mentally active by involving them in the community. Seniors have a great deal of knowledge and experience that can benefit the community. Ask them to volunteer their time to provide needed services: mentor or tutor school-age children, serve as surrogate grandparents for children who don't have grandparents, serve in their professional field, or provide other community services.
- Promote healthy nutrition among seniors in your community. Prepare dishes with fruits and vegetables at church gatherings and other community events.

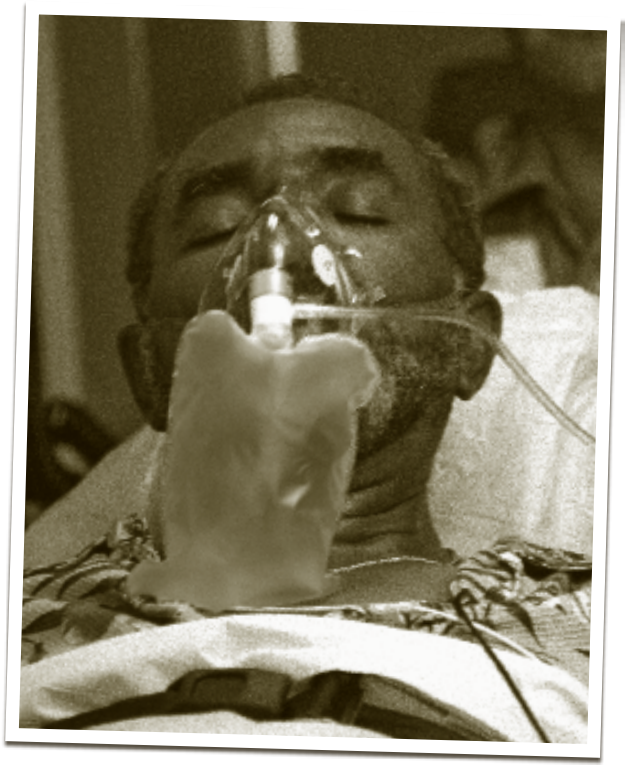
PREVENTIVE HEALTH KEY TO HEALTHY SENIOR POPULATION

Many older adults suffer needlessly from chronic diseases and injuries due to obesity and sedentary lifestyle. Physical inactivity and unhealthy eating can lead to obesity, and the rates of **overweight and obesity** in South Carolina are among the highest in the nation. Unhealthy lifestyle patterns frequently begin at an early age and continue into the later years of life. In South Carolina, 33.3 percent of adults 65 years of age and older have a sedentary lifestyle, and 59.5 percent are overweight and obese. For more on overweight and obesity, see Pages 10 and 20-23.

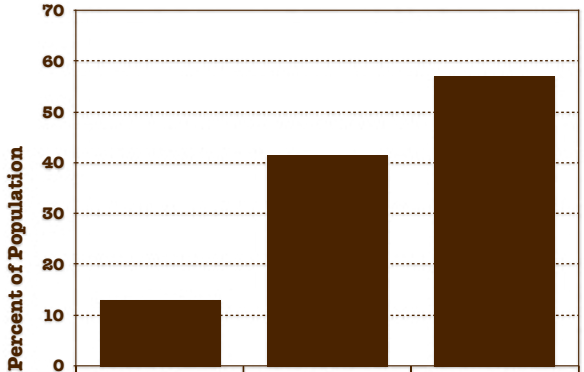
Fortunately, by taking preventive steps, the diseases, injuries and functional limitations associated with lack of physical activity and overweight or obesity can be prevented or delayed. Poor health is not an inevitable consequence of aging, and it is never too late to make behavior changes. Scientifically proven preventive measures, such as healthy lifestyle behaviors (eating healthy, avoiding tobacco use, and exercising regularly) and clinical preventive services (influenza and pneumonia vaccinations and early detection of disease through screening) can extend life and preserve quality of life. Simple health promotion practices, such as regular physical activity, can prevent many chronic diseases and make it possible for older adults to remain at home in their own communities. Use of prevention measures would substantially reduce the personal, familial, social and economic costs of aging and would lead to healthy and productive years of life for the growing population of seniors. Public health professionals and the general public should continue promoting and adopting preventive steps so that more South Carolinians can enjoy healthy aging.

SENIOR POPULATION GROWING

By 2015, South Carolina's mature adult population, those 50 years old and older, is expected to make up one-third of the state's residents. Mature adults outpaced other age groups with a 33 percent growth rate between 1990 and 2000. In 2000, South Carolina boasted 485,300 residents 65 and older. The mature adult population has increased by approximately 100,000 each decade from 1950 to 1990 and by 90,900 from 1990 to 2000, representing an overall increase of 322 percent. An astonishing growth in the number of South Carolina residents over 85 parallels the national trend. In 1950, their numbers totaled 4,193. By 2000, there were 50,269, or 12 times the number in 1950. By the year 2025, estimates are that the number of people over 85 in South Carolina will reach 98,609, representing a 96 percent increase from 2000.



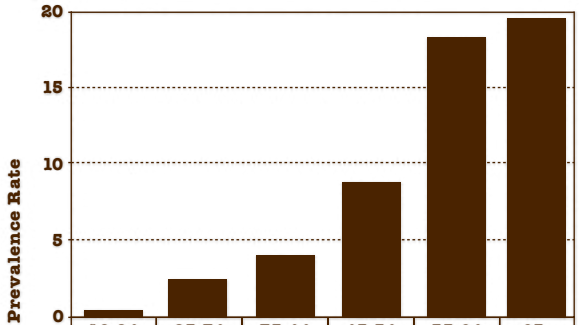
Prevalence of Arthritis in S.C. by Age



	18-44	45-64	> 65
Total	13.3	41.7	56.9

Data Source: SC DHEC BRFSS 2004

S.C. Diabetes Prevalence by Age Group



	18-24	25-34	35-44	45-54	55-64	65+
Total	0.3	2.3	4.1	8	17.5	19.4

Data Source: SC DHEC BRFSS (2004)

POOR HEALTH AMONG SENIORS COSTLY

Preventive steps are important measures because the growing population of older adults places increased demands on the health care system. Seniors are the most frequent users of health care services in our state. Growth in the population of seniors needing long-term care and health care, the diminishing ability of family members to provide **long-term care**, changes in medical technology, and rising health care costs have resulted in increasing obligations for federal and state governments, as well as for families.

The cost of health care in institutions can be staggering. One year in a nursing home can cost from $35,000 to $45,000. Medicaid bears the major portion of these expenses. With the state's economy, future reimbursement costs for nursing homes will be a challenge. Research shows that measures, such as increasing physical activity among seniors, can prevent or delay disability and the need for long-term care.

ARTHRITIS LEADING CAUSE OF DISABILITY

Arthritis and other rheumatic conditions remain among the most common chronic conditions and, as a group, are the leading cause of disability in the United States. Thirty percent of South Carolina adults have doctor-diagnosed arthritis, according to the S.C. BRFSS. Of those with arthritis, approximately 41 percent have activity limitation from chronic joint symptoms. While arthritis is not limited to seniors, the prevalence increases with age. Nearly 57 percent of South Carolina adults ages 65 and older have arthritis. Almost 40 percent of adults over the age of 65 have activity limitation due to chronic joint symptoms.

Some forms of arthritis can be prevented. For example, weight control and injury prevention lower the risk for developing osteoarthritis, the most common form. Physical activity can lower the risk of developing arthritis as well as improve the quality of life for those who have arthritis. For any form of arthritis, early diagnosis and appropriate management can reduce symptoms, lessen disability and improve quality of life.

http://www.scdhec.gov/arthritis

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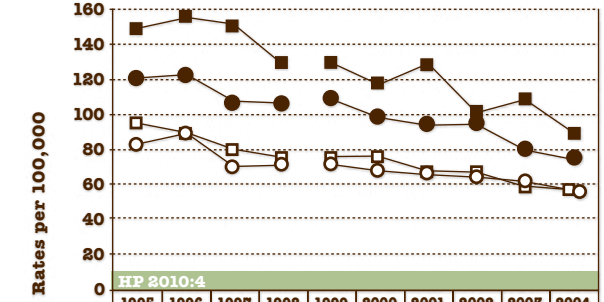
INFLUENZA (THE FLU), PNEUMONIA TAKE TOLL ON SENIORS

Influenza (the flu) and pneumonia together are the seventh leading cause of death in South Carolina among people 65 and older, claiming 648 lives in 2004. Influenza epidemics cause an average 36,000 deaths and more than 200,000 excess hospitalizations annually in the United States. The primary option for reducing the effect of influenza is taking the flu vaccine yearly, either as a shot or nasal spray. Pneumonia, a bacterial infection in the lungs, is a common complication of the flu. A pneumoccocal vaccine is recommended for people ages 65 or older. Most people need only one pneumococcal vaccine in a

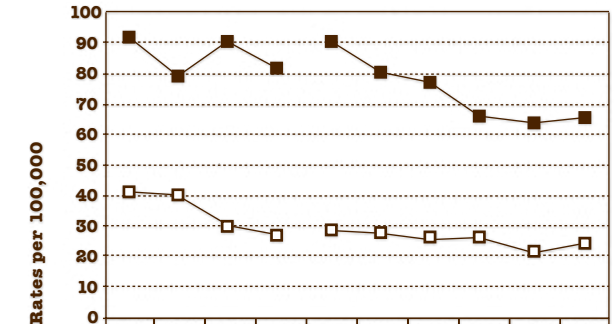
S.C. Stroke Death Rates*



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	94.4	90.5	80.5	74.5	74.6	76.5	66.1	66.4	59.8	59.3
White Female	83.7	90.5	70.5	73.6	75.3	68.7	67.0	62.8	61.5	59.0
Black Male	148.9	156.5	150.0	131.4	132.3	119.2	128.4	102.6	114.2	89.0
Black Female	120.8	123.4	107.4	105.6	110.0	99.6	96.0	96.8	80.5	77.0
Total	99.3	102.4	86.5	84.6	85.5	80.6	76.9	72.5	68.8	64.8

*Age Adjustment Uses 2000 Standard Population
Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

S.C. Prostate Cancer Death Rates*



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	42.6	40.9	31.8	28.0	29.4	28.8	27.2	27.2	21.2	24.5
Black	93.6	91.8	92.0	84.3	91.7	81.4	79.8	67.4	65.4	67.6
Total	54.6	52.7	44.6	39.5	42.2	39.6	38.0	35.2	29.8	33.0

* Age Adjustment Uses 2000 Standard Population
Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-10

lifetime. Medicare Part B pays for both the flu and pneumococcal vaccines.

DHEC provides a number of influenza prevention strategies, including: health care provider education; community and coalition collaborations to establish nontraditional vaccination sites; reminder/recall interventions to increase access to vaccinations; and the use of standing orders to increase community demand for and access to influenza and pneumococcal immunizations. For more on immunizations among minorities, see Pages 41 and 68.

http://www.scdhec.gov/immunization

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CARDIOVASCULAR DISEASE, DIABETES CAN BE PREVENTED

Cardiovascular disease and **diabetes** are serious chronic diseases. **Heart disease** and **stroke** are the principal components of cardiovascular disease, the leading cause of death in the nation and in South Carolina. Regardless of race or ethnicity, diabetes prevalence increases with age. Currently in South Carolina, people over 65 years of age have the highest prevalence of diabetes in the state, 10 percent higher than those in the 55- to 64-year-old age group and 150 percent higher than those in the 45-54 age group. In addition, deaths from diabetes and cardiovascular disease increase dramatically with age. People 65 and older have almost eight times higher death rates from stroke and heart disease than those in the 45- to 64-year-old age group. People ages 65 and older have 4.5 times higher death rates from diabetes than people in the 45- to 64-year-old age group.

Both cardiovascular disease and Type 2 diabetes can be prevented or delayed by following simple guidelines. For example, just a small weight loss of 7 percent can prevent or delay Type 2 diabetes in people at highest risk for the disease. For more on these diseases , see Pages 30, 36 and 60.

http://www.scdhec.gov/cvh

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CANCER HIGH AMONG SENIORS

As age increases, the risk of cancer increases. For all types of cancer combined, the incidence rate is nine times higher for adults ages 65 and older than for those ages 64 and younger. For specific types of cancer, this difference is even more marked: The rate of **bladder** cancer is 17 times higher among the older age group, the rate of **prostate** cancer is 16 times higher, and the rate of colorectal cancer is 12 times higher. Ninety percent of **colorectal** cancers are diagnosed among adults 50 years and older

Racial disparities among older adults are evident for **cervical** and **prostate** cancer. From 1997-2002, the most current six-year trend data available, the rate of cervical cancer among black women ages 65 and older was 35.1 per 100,000 women compared with 11.1 per 100,000 for white women of the same age group (three times higher). The rate of prostate cancer among black men ages 65 and older was 1,529.8 per 100,000 compared with 857.8 per 100,000 for white men of the same age group (1.8 times higher). Likewise, the death

rate is significantly higher for older black men than for white men. For all types of cancer combined, the rates for blacks and whites ages 65 and older are similar (2,144.3 per 100,000 versus 2,119.0 per 100,000, respectively).

Screening and early detection of cancer can improve outcomes and save lives. Beginning at age 50, men and women should have periodic colon and rectal cancer screening. Yearly prostate screening should begin at age 50 for white men and age 45 for African-American men and other men at high risk. Women should continue to have periodic cervical screening until age 70. People with a family history of cancer or a personal history of risk factors or earlier cancers may need to follow earlier screening patterns. The best way to ensure proper screening is to talk with a doctor. For more on cancer disparities, see Pages 36-37 and 59-60.

http://www.cancer.org

http://www.scdhec.gov/co/phsis/biostatistics/SCCCR/scccrmain.htm

FALLS THE LEADING CAUSE OF SENIOR INJURY

Falls are the number one cause of **unintentional injury** in the nation and the state among adults 65 years of age and older. Unintentional injuries due to motor vehicle crashes rank second statewide and fourth nationally among seniors. Falls are also the leading cause of injury death in the state, followed by motor vehicle crashes. Of the 479 deaths caused by unintentional injury in the state during 2004 among adults 65 years and older, falls accounted for 147 deaths, and motor vehicles crashes accounted for 117 deaths.

Risk factors related to falls in the senior population are lower body weakness, problems with walking and balance, and inappropriate management of medications. Falls can be prevented through regular physical activity to increase lower body strength and improve balance. Another fall prevention method is for doctors and pharmacists to review individuals' prescriptions and over-the-counter medications to reduce side effects and interactions.

SENIORS AT RISK FOR SUICIDE

Suicide is the third leading cause of injury death among adults 65 years and older in South Carolina. In 2004, there were 79 suicide deaths among adults 65 and over in the state with a death rate of 15.2 per 100,000 population. Men 75 years of age and older have one of the highest suicide rates among all age groups. Men account for four out of five completed suicides among those older than 65. The effect of spousal loss, a risk factor for suicide, is most pronounced among men.

Seniors are far more likely to complete suicide attempts than are younger age groups. Firearms were used in 87 percent of suicides committed by adults over the age of 65 in 2004. In addition to these overt attempts, older people often exhibit subtle behaviors such as a refusal to eat or drink and noncompliance with medical treatment.

One of the fastest growing at-risk populations is the Hispanic population. As South Carolina experiences an increase in the Hispanic population and continues to see an influx of retirees to the state, it is anticipated that senior suicides will increase.

The first step in preventing suicide is to identify and understand the risk factors that increase the likelihood of a suicide attempt as well as the protective factors that buffer people from the risks associated with suicide. Major risk factors include chronic or serious physical illnesses, depression, family history of suicide, alcohol or substance abuse,

EARLY DETECTION CAN REDUCE SENIOR DEATHS FROM BREAST CANCER

In South Carolina, the **breast cancer** death rate for women ages 65 and older is 7.7 times higher than the rate for women under the age of 65, according to 1999-2004 data. The death rate for black women ages 65 years and older is 11 percent higher than for white women in the same age group. However, among women under 65 years old, the breast cancer death rate for blacks is 84 percent higher than for whites.

Early detection through screening is the best way to reduce the risk of death from female breast cancer. Screening methods for early detection include self-breast exam, **mammography** and **clinical breast exam**. Starting at age 40, women should have a mammogram and a clinical breast exam every year. Breast self-exams should be performed monthly. In addition to screening, lifestyle changes can help reduce the risk of female breast cancer.

www.scdhec.gov/cancer

Dr. Irene Prabhu Das:
prabhudi@dhec.sc.gov
(803) 545-4103

S.C. Breast and Cervical Cancer Early Detection Program: The Best Chance Network
1-800-227-2345

bereavement or other losses and social isolation. Protective factors include ongoing, effective clinical care for mental and physical health; family and community support; problem-solving skills and cultural and religious beliefs that discourage suicide.

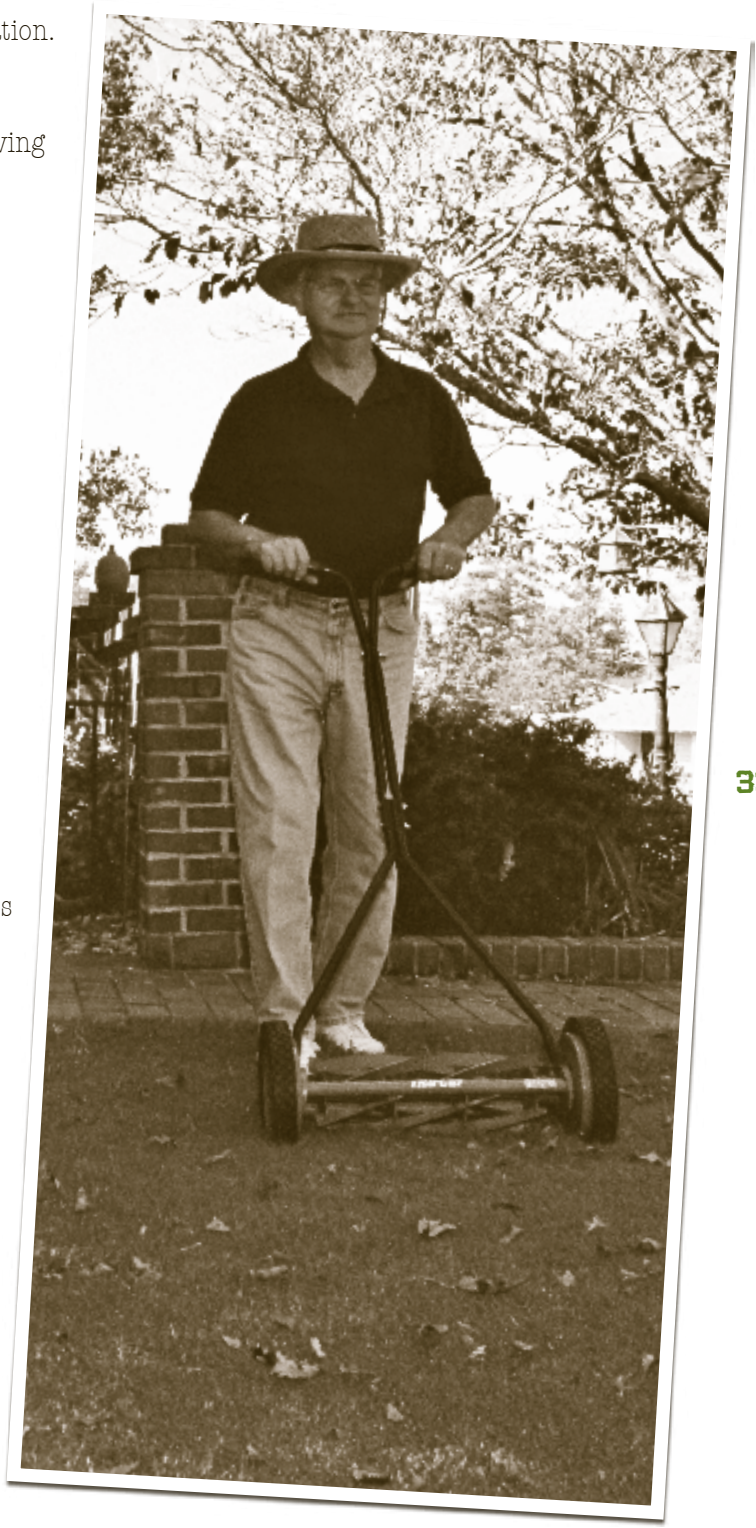
http://www.scdhec.gov/injury

Lou-Ann Carter:
carterlp@dhec.sc.gov
(803) 898-0314

HEALTHY COMMUNITIES LEAD TO HEALTHY AGING

Communities can assist in healthy aging by making safe, more activity-based environments more accessible to seniors. Planning should include creating communities with bike paths, sidewalks and neighborhood grocery stores. Safer communities and mass transportation are central issues for our aging population because they provide basic access to services that younger South Carolinians take for granted.

Communities can assist their aging population by assuring that supports and services are available to promote healthy behaviors and health improvements. Senior citizens should be involved in efforts to conduct community planning that promotes increased activity levels and independence for older residents. Social supports, such as volunteer opportunities, also provide a way for seniors to contribute to their communities while others gain from their knowledge and experience. Successful initiatives should focus on enabling seniors to age in



place while maintaining the quality and years of their lives. Safe, senior-focused housing is needed and can be encouraged by working with developers to assure larger door openings for wheelchair accessibility. Adaptations are easily made for door handles, and ramps allow quick movement in the event of a fire or health emergency.

INSTITUTIONAL ALTERNATIVES ARE DESIRED

DHEC monitors the health and safety at adult day care centers, nursing homes, home health agencies and community residential care facilities. More than 40 nursing homes in South Carolina are implementing person-centered directed care (a culture change that gives residents, their families and caregivers more control over decisions affecting the resident) or other quality initiatives with similar values and principles. Many facilities that have implemented this cultural change have reduced staff turnover rates, use of medication and infection rates.

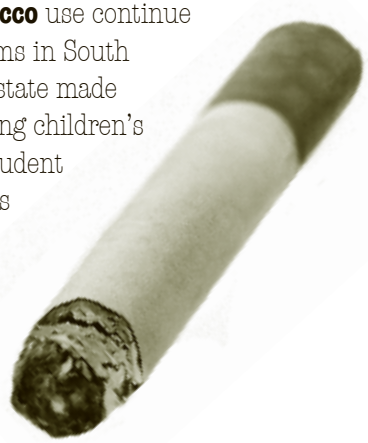
As South Carolina's aging population grows and the need for long-term care services increases, innovative models of care to help keep seniors in their homes and communities are needed. One such model is **PACE (Program of All-Inclusive Care for the Elderly)**. PACE takes many familiar elements of the traditional health care system and reorganizes them in a way that makes sense to families, health care providers and the government programs and others that pay for care.

http://www.scedencares.org
http://www.pioneernetwork.org
http://www.culturechangenow.com

ONGOING CHALLENGES, NEW APPROACHES

Changes in **policy and the environment** can improve health among all age groups. DHEC participates in some proven and promising approaches, including communitywide campaigns, creating or improving access to places for physical activity, workplace programs, and transportation policy and infrastructure changes to promote non-motorized transit and better land use planning.

Obesity and tobacco use continue to be large problems in South Carolina, but the state made strides in improving children's health with the Student Health and Fitness Act of 2005. The act addresses nutrition and physical activity requirements for schools.



At 77.2 percent, South Carolina remains above the U.S. average for **immunizations** of children 19-34 months.

As little as a six-month delay in treatment of newborns with **hearing loss** can impact the child's need for special education versus mainstream education. First Sound, South Carolina's Universal Newborn Hearing Screening Program, is working to improve the lost-to-follow-up rate of children identified with hearing loss, but not receiving services, through birth certificate information, developing a parent-to-parent support group for those who have children with hearing loss, and working on improving reimbursement issues.

Postpartum newborn home visits can make a difference in a family's health, but DHEC has been able to serve only 46 percent of the eligible population because of a critical nursing shortage.

A nursing shortage combined with **budget cuts** also is making the provision of family planning services at previous levels a challenge.

DHEC has been moving from providing primary and specialty medical care to developing **partnerships** with private/public medical providers to provide health care services to families. DHEC continues to develop and maintain relationships with pediatricians, family practice physicians, obstetricians, specialty physicians, dentists and dental hygienists.

The state's **senior** population is growing. Communities can assist in healthy aging by making safe, more activity-based environments more accessible to seniors. Planning should include creating communities with bike paths, sidewalks and neighborhood grocery stores. Safer communities and mass transportation are central issues for our aging population because they provide basic access to services that younger South Carolinians take for granted.

ADDITIONAL RESOURCES:

CareLine
(information and referral to maternal and child health services)
1-800-868-0404

Healthy Infants
http://www.modimes.org
http://www.cdc.gov/nccdphp/drh/prams_sc.htm
http://www.childbirth.org
http://www.healthystartassoc.org

Teen Pregnancy Prevention
http://www.freeteens.org

Prenatal Care
http://www.healthystart.net

Access to Health Care
Child Health Insurance Program, Partners for Healthy Children
1-888-549-0820

American Academy of Pediatrics
http://www.aap.org

Children's Defense Fund
http://www.childrensdefense.org

AARP
http://www.aarp.org

Administration on Aging
http://www.aoa.gov

Centers for Disease Control and Prevention: Healthy Aging
http://www.cdc.gov/aging

Eden Alternative
http://www.edenalt.com

Health care facilities licensed by DHEC Health Regulations
http://www.scdhec.gov/hr/licen/hrtypfac.htm

Lt. Governor's Office on Aging
(803) 734-9900
http://www.state.sc.us/ltgov/aging

The National Council on the Aging
http://www.ncoa.org

Eliminate Health Disparities

The burden of disease for various health conditions is not borne equally by all population groups. Racial and ethnic minorities, in general, suffer a disproportionate share of illness and early death. DHEC efforts target eliminating health disparities in six critical areas by the year 2010. These areas are infant mortality, cancer screening and management, cardiovascular disease, diabetes, HIV/AIDS and immunizations.

PREVENTION, TREATMENT KEY IN ELIMINATING CARDIOVASCULAR DISEASE DISPARITY

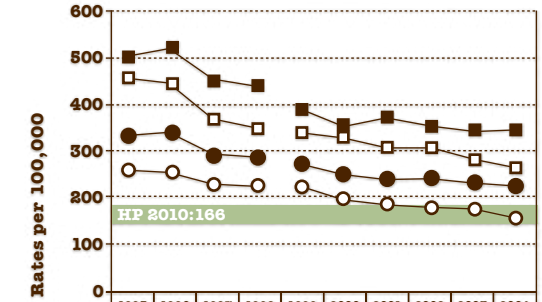
Heart disease and **stroke** are the primary components of **cardiovascular disease (CVD)**. Heart disease is the number one chronic disease killer in South Carolina. A staggering 35 people die every day in our state from cardiovascular diseases. In 2004, there were more than 61,000 hospital visits and 9,148 deaths attributed to heart disease, and more than 13,000 hospital visits and 2,631 deaths due to stroke in South Carolina. Death rates for both heart disease and stroke are higher in our state for African-Americans than for whites. Based on the 2004 Behavioral Risk Factor Surveillance System Survey, the prevalence of stroke among African-Americans in our state (4.1 percent) is nearly twice that of whites (2.3 percent).

With funding and guidance from the Centers for Disease Control and Prevention (CDC), DHEC focuses on policies and patient care protocols to reduce the risk of disease and death, including current guidelines and advances in disease treatment. In partnership with a variety of health, business and community leaders, DHEC has developed and implemented a Cardiovascular Health State Plan to reduce the toll that CVD takes on South Carolina residents and improve overall cardiovascular health. The plan identifies African-Americans as a priority and uses health promotion efforts targeting communities, work sites, schools, faith communities and health care systems.

http://www.scdhec.gov/cvh

Dory Masters:
masterdm@dhec.sc.gov
(803) 545-4498

S.C. Heart Disease Death Rates*



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	471.9	451.2	369.9	352.9	341.9	331.0	307.9	305.7	286.2	269.9
White Female	265.5	264.0	227.2	222.6	211.4	199.3	187.4	181.0	174.7	159.0
Black Male	505.5	521.1	453.8	433.8	391.2	362.7	383.1	357.9	347.8	348.9
Black Female	340.6	341.7	297.7	291.9	273.4	253.7	256.7	238.1	228.3	219.4
Total	361.5	356.2	304.0	294.1	280.0	264.9	251.8	245.9	235.0	221.2

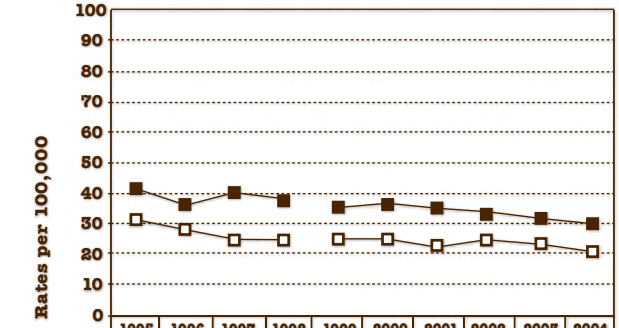
*Age Adjustment Uses 2000 Standard Population
Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

OVERALL CANCER RATES DECLINE, BUT DISPARITIES CONTINUE

Breast cancer accounts for approximately 32 percent of all female cancer cases. Unfortunately, more black women are diagnosed with breast cancer at later stages, resulting in increased death rates. Even though breast cancer deaths have declined since 1990 among black and white women, the disparity in the death rates between the two population groups continues.

DISPARITIES

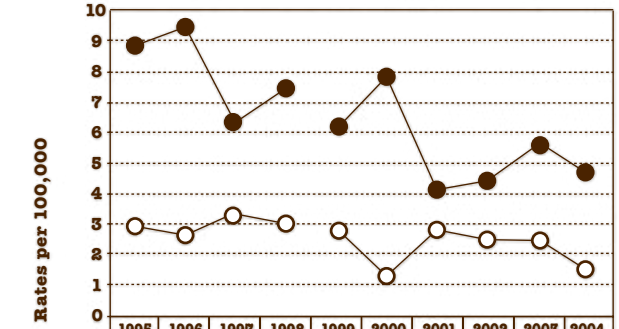
S.C. Breast Cancer Death Rates*



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Female	31.0	27.5	24.4	24.7	25.6	25.4	22.7	24.9	23.0	20.8
Black Female	41.6	36.6	40.9	37.8	35.5	37.1	35.2	32.3	31.3	30.6
Total	33.7	29.8	28.4	28.1	28.1	28.5	26.1	26.8	25.0	23.4

*Age Adjustments Use 2000 Standard Population
Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-10

S.C. Cervical Cancer Death Rates*



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Female	2.9	2.7	3.2	3.0	2.8	1.3	2.8	2.3	2.3	1.5
Black Female	8.7	9.4	6.3	7.4	6.1	7.9	4.1	4.5	5.6	4.7
Total	4.3	4.3	3.9	4.2	3.6	3.0	3.2	2.9	3.1	2.4

* Age Adjustments Use 2000 Standard Population
Data Source: SC DHEC PHSIS-SCCCR
Rates calculated using small numbers are unreliable and should be used cautiously
Years 1999+ used ICD-10

Higher percentages of black women are diagnosed with late stage **cervical cancer** than are white women (40.0 percent and 28.2 percent, respectively, among those diagnosed). From 1999 through 2004, South Carolina's cervical cancer death rate of 3.0 per 100,000 is higher than the U.S. rate of 2.8 per 100,000. Even though the rates among black women are decreasing, disparities continue to persist. Black women are more than twice as likely to die from cervical cancer as white women.

Breast and cervical cancer can be diagnosed early, reducing deaths. DHEC's **Best Chance Network** provides breast and cervical cancer screening for low-income women ages 47-64 through a network of physicians and clinics. Regular mammograms can help detect breast cancer at its early stages when it is most treatable. Regular Pap tests will help detect precancerous conditions before cervical cancer develops.

Prostate cancer accounts for 30 percent of all male cancer cases in South Carolina and is the most commonly diagnosed cancer among men. Prostate cancer death rates have been decreasing among both white and black men; however, almost three times more black men die of prostate cancer than white men. From 1999 through 2004, South Carolina's prostate cancer death rate of 36.0 per 100,000 was 17 percent higher than the U.S. rate of 30.9 per 100,000. From 1997 through 2002, a higher percentage of black men were diagnosed with late stage prostate cancer than were white men (17.5 percent and 13.4 percent, respectively, among those diagnosed with cancer). The likelihood of survival is lower when prostate cancer is diagnosed at a later stage when it has spread to the lymph nodes or to other parts of the body. Early detection will help diagnose prostate cancer at earlier stages when treatment is more effective and successful.

DIABETES GAP NARROWING

Diabetes is the seventh leading cause of death in South Carolina. In 2004, three to four people died each day from complications of diabetes (heart disease, stroke, kidney failure, etc.). That is one death from diabetes every seven hours, 33 minutes.

According to the CDC, the incidence (new cases only) of diabetes among US adults jumped 43 percent from 4.9 per 1,000 population in 1997 to 7.0 per 1,000 population in 2004. In comparison, among adult South Carolinians, the overall prevalence (live patients including both new and old cases) of diabetes has increased by 46 percent during the past 16 years, from 5.7 percent in 1988 to 8.3 percent in 2004. The most dramatic prevalence increase among different racial-gender subpopulations is 70% in African American Males. The 2004 statewide prevalence among African Americans was 11.1 percent compared with 7.7 percent among Caucasian South Carolinians.

However, the racial disparity is narrowing, not because of an improvement in minority rates, but rather because of an increase in diabetes among the white population. Diabetes has an immense impact on public health and medical care because it increases an individual's risk for blindness, lower extremity amputation, kidney failure, nerve disease, hypertension, ischemic heart disease and stroke. One of every seven patients in a South Carolina hospital has diabetes. The total charges for inpatient hospitalizations and emergency room visits for diabetes in South Carolina were more than $2.1 billion in 2003, the most current year available.

CANCER AMONG MINORITIES TARGETED

DHEC, in partnership with community and faith-based organizations, coordinates **Real Men Checkin' It Out**, a prostate cancer education and screening program targeting African-American males. Educational materials are distributed through barbershops, places of worship, funeral homes, car repair shops and other places where men are likely to be found. Prostate cancer screening and follow-up are also arranged through local physicians and hospitals. DHEC established the African-American Prostate Cancer Network (AAPCN) in January 2005. AAPCN serves as a resource for promoting, developing and implementing culturally appropriate strategies to address prostate cancer prevention, screening and treatment for African-American males in South Carolina.

DHEC is collaborating with several organizations to extend its efforts further into the community and establish partnerships to address the cancer disparity in the state. Examples of these partnerships include: 1) the S.C. Cancer Disparity Community Network at the University of South Carolina's Arnold School of Public Health, a community-based research project, which organizes local communities and their leaders to collect data to assess cancer in minority communities and to develop local education and advocacy programs to address cancer; 2) the S.C. Cancer Alliance's five-year strategic cancer prevention and control plan, which emphasizes strategies to reach underserved populations and train more minority health professionals; and 3) the CDC and Us TOO, an international prostate cancer education and support network, which provides prostate cancer education services to African-American males. For information on cancer among seniors and cancer data, see Pages xx and xx.

http://www.scdhec.gov/cancer

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(803) 545-4103

http://www.scdhec.gov/health/minority

SC DHEC Office of Minority Health

Medicare and Medicaid covered almost 75 percent of those charges. For more on diabetes initiatives, see Pags 10-11.

Even today, when complications of diabetes can be prevented or delayed, many South Carolinians affected by the disease still remain undiagnosed. In 2004, 8.3 percent of South Carolinians reported having diabetes, and another 1.1 percent reported having been told they have pre-diabetes. Pre-diabetes is a new term for a condition of fasting blood sugar more than 100 mg/dl, but not at the level of diagnosis of diabetes (greater than 126 mg/dl). The CDC funds DHEC's efforts to work with high-risk populations disproportionately burdened by the disease. Since diabetes affects the entire body, health promotion efforts must include wellness, physical activity, weight and blood pressure control and smoking cessation. Only through a coordinated effort will South Carolina be able to close the gap. For more on community efforts to address diabetes, see Pages 10-11.

http://www.scdhec.gov/diabetes

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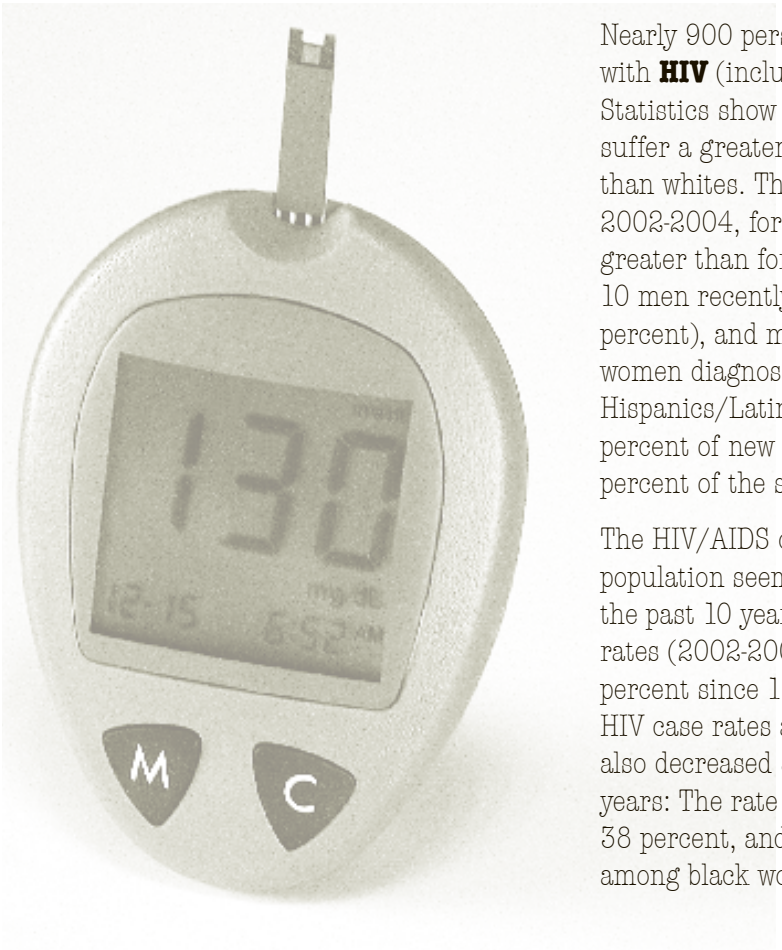
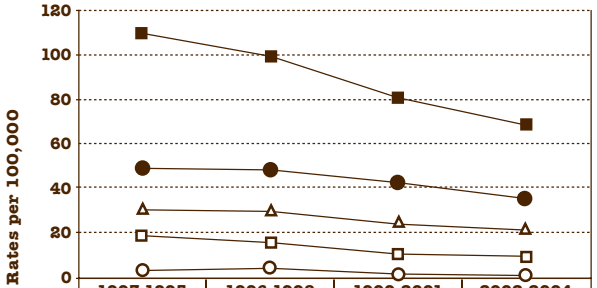


AFRICAN-AMERICANS HARDEST HIT BY HIV/AIDS

Nearly 900 persons are newly diagnosed with **HIV** (including **AIDS** cases) each year. Statistics show that black men and women suffer a greater burden of the disease than whites. Three-year case rates, from 2002-2004, for blacks were eight times greater than for whites. Seven of every 10 men recently diagnosed are black (70 percent), and more than eight of every 10 women diagnosed (81 percent) are black. Hispanics/Latinos currently comprise three percent of new infections and represent two percent of the state's population.

The HIV/AIDS case rates per 100,000 population seem to have decreased over the past 10 years. The three-year HIV case rates (2002-2004) have decreased 33 percent since 1993-1995. Overall three-year HIV case rates among African-Americans also decreased 34 percent over the past 10 years: The rate among black men dropped 38 percent, and it dropped 27 percent among black women. This success might

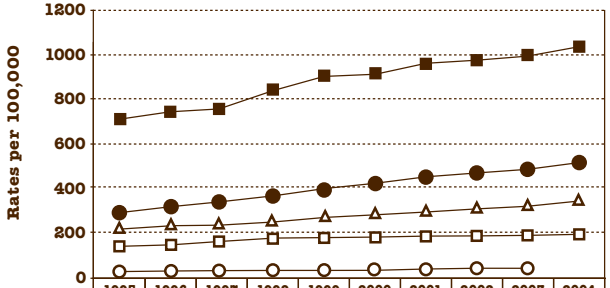
S.C. New HIV/AIDS Case Rates Per 100,000 Population, by Race/Gender



	1993-1995	1996-1998	1999-2001	2002-2004
White Male	19.2	16.8	10.4	9.7
White Female	3.5	4.2	2.8	2.9
Black Male	109.6	99	81.5	67.8
Black Female	48.5	47.9	41.6	35.5
Total	32.1	29.8	24	21.5

Data Source: SC DHEC HIV/AIDS Reporting System

S.C. Number of Persons Living With HIV/AIDS by Race/Gender



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	141.9	149.6	160.0	167.3	171.2	173.6	177.6	183.0	188.7	196.5
White Female	24.2	26.7	30.0	32.4	34.3	36.2	37.4	39.4	41.0	
Black Male	715.7	742.2	762.9	838.0	894.7	900.1	948.4	976.1	1001.6	1042.8
Black Female	282.1	309.7	337.2	362.6	396.0	412.5	438.5	456.5	477.3	501.4
Total	208.9	220.4	235.0	253.1	268.7	278.1	291.4	303.6	315.6	330.6

Data Source: SC DHEC HIV/AIDS Reporting System

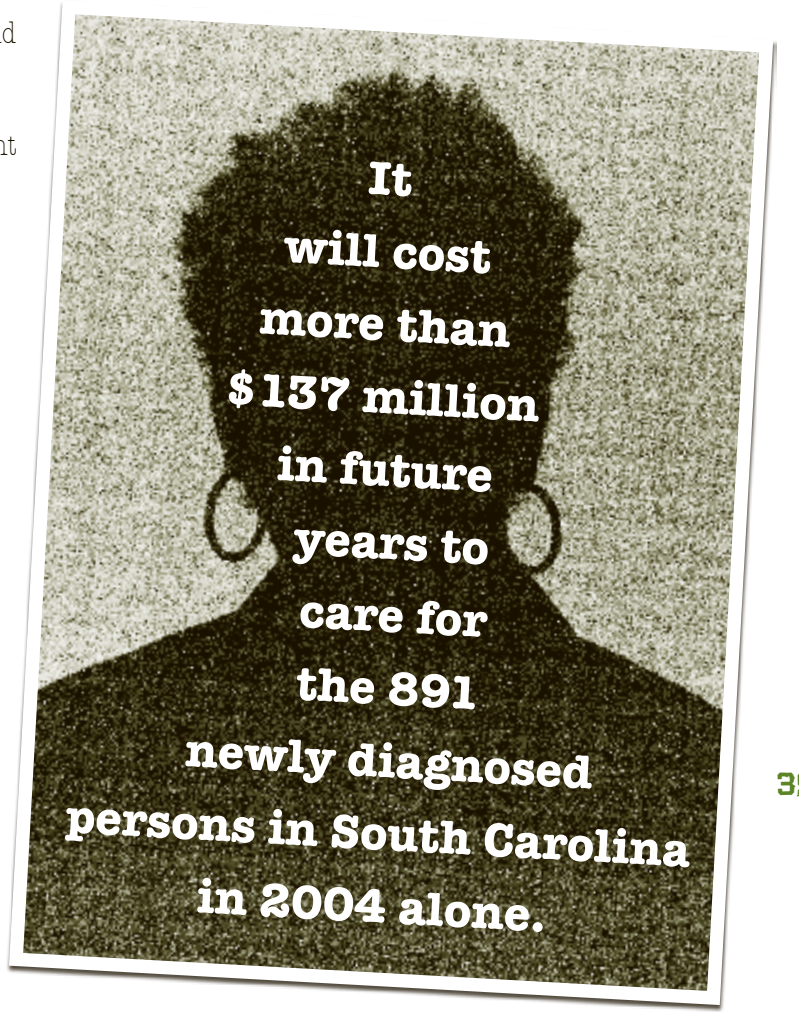
partially be due to intense prevention and care services delivered by community organizations, local public health departments, and HIV care and treatment providers.

While the rate of new HIV/AIDS cases diagnosed appears to be decreasing, the number of new infections diagnosed each year appears to remain level. And many people are still being diagnosed late in their disease. Linking newly diagnosed persons to HIV care services and ensuring they maintain ongoing care is a key strategy for both prevention and prolonging quality of life for infected people. Yet estimates indicate that nearly half (45 percent) of blacks with HIV/AIDS may not have received HIV care services in 2004.

Improved drug regimens help HIV-infected people live longer, healthier lives and contribute to a steadily increasing number of people living with HIV/AIDS in South Carolina. At the end of 2004, 13,748 people were reported to be living with HIV infection (including AIDS) in the state. The rate of people living with HIV/AIDS per 100,000 was five times higher for black males than for white males and 12 times higher for black females than for white females.

Race and ethnicity are not, themselves, risk factors for HIV infection. However, African-Americans are more likely to face challenges linked with HIV risk, such as poverty, substance use, denial and stigma, and are more likely to have sexual partners at risk.

According to recent CDC HIV/AIDS surveillance data, the South comprises an increasing share of the estimated number of new AIDS cases diagnosed each year compared with the rest of the U.S. South Carolina ranked third in the country for the proportion of persons living with AIDS who are African-American (73 percent) and ninth for the proportion who are women living with the disease (28 percent). This disproportionate infection rate combined with the South's high rates of other sexually transmitted diseases, highest rates of poverty in the nation, and highest proportion of non-urban dwellers combine for a major public health challenge.



DHEC PREPARES FOR HEART PATIENT NEEDS IN DISASTER

As South Carolina continues building its ability to respond to public health emergencies, DHEC recognizes that the state's high number of residents with heart disease and those at risk for stroke would need special attention in a disaster. Three DHEC cardiovascular health specialists participate on the agency's emergency evaluation team to assess their needs in the aftermath of a mass trauma event to make sure they receive the appropriate, life-saving services. For more on public health preparedness, see Pages 5-9 and 18.

LATINO OUTREACH IMPROVING

DHEC has made great inroads into the Latino community by having a staff member serve as ex-officio chair of the S.C. **Hispanic/Latino** Health Coalition, which addresses Latino health issues. DHEC also distributes culturally appropriate cardiovascular health and disease materials to Latinos via Latino-related events and community-based organizations, including local public health departments and their partners.

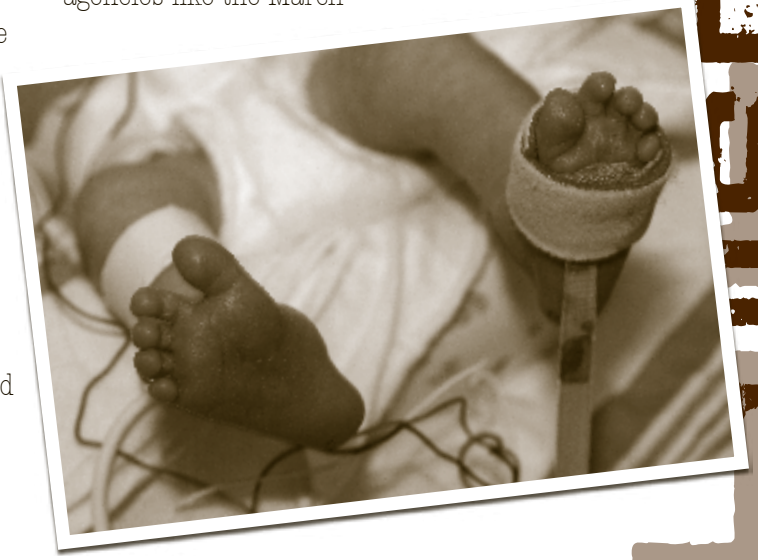
The focus of public health efforts toward preparedness for bioterrorism and the response to emerging infectious diseases, such as SARS or Avian flu, has challenged such traditional public health efforts as HIV and STD prevention by diverting resources. Recent disasters such as **Hurricane Katrina** have impacted HIV services in neighboring states. South Carolina joined many states in developing emergency procedures for enrolling persons with HIV in DHEC's AIDS Drug Assistance Program to help ensure evacuees could receive essential HIV treatment drugs. At the same time, HIV/AIDS and other sexually transmitted diseases continue to be a significant public health problem.

The costs of providing care and treatment for persons with HIV are significant. The national estimate of the lifetime treatment cost per HIV case is $154,402. It will cost more than $137 million in future years to care for the 891 newly diagnosed persons in South Carolina in 2004 alone. This does not include the costs of suffering, lost productivity, creativity and death to family members. Nearly $80 million was spent in 2004 in South Carolina for HIV-related care services in public funds alone. Medicaid had the greatest expenditures of more than $52 million.

TOO MANY BABIES BORN TOO SMALL

Infant mortality is one of the six priority health disparity areas in South Carolina and should be included in any health disparity effort. The infant death rate for blacks in South Carolina, at 13.0 deaths per 1,000 live births in 2003, the most current data available, is more than twice that of whites (5.9 deaths per 1,000 live births). The percent of black babies born with **low birth weight** (15.3 percent in 2004) is almost twice that of white babies (7.9 percent in 2004). Nationally, black mothers in every age category (not just teens) have a greater risk of losing their babies than white mothers of similar age. College-educated black women also experience a disparate rate of infant deaths.

There are many ways infant deaths can be curtailed, including planning pregnancy and receiving early prenatal care. DHEC is in its second year of implementing strategies to reduce the racial and ethnic disparity in infant mortality within Region 6 (Georgetown, Horry and Williamsburg counties), which has the highest black infant mortality rate in the state. The plan also calls for the expansion and development of community and health care provider capacity to reduce risks of low birth weight and infant deaths. DHEC also continues to form partnerships with agencies like the March



DISPARITIES

of Dimes, the S.C. Perinatal Association and Medicaid to develop other strategies to address disparities. A Summit on Premature Birth was held in June 2005, and a Sleep Safety Program for Babies was implemented statewide.

MINORITIES LESS LIKELY TO SEEK FLU VACCINE

A disproportionate number of minorities fail to get vaccinated to protect against **influenza** (the flu) and **pneumonia**, which together are the ninth leading cause of death among South Carolinians of all ages. Influenza epidemics cause an average 36,000 deaths and more than 200,000 excess hospitalizations annually in the United States. The primary option for reducing the effect of influenza is taking the flu vaccine yearly, either as the shot or the nasal spray.

Minorities, especially those who are not fluent in English, are less likely to know or be informed by a health care provider that they need a flu shot every year. Raising flu vaccination rates among minorities will require shattering some myths, especially the biggest myth of all, that the vaccine causes flu.

Some of DHEC's influenza prevention strategies include health care provider education, community and coalition collaborations to establish nontraditional vaccination sites, increasing access to vaccinations through reminder/recall interventions, and the use of standing orders to increase community demand for and access to influenza and pneumococcal immunizations.

ONGOING CHALLENGES, NEW APPROACHES

Key challenges must be addressed to reduce the rate of **HIV** infection in South Carolina. Many state and community partners are needed to address HIV-related stigma, mental health issues, substance use and need for adequate housing and food – all barriers to prevention. DHEC urges more HIV testing in both medical and community settings and the use of new rapid HIV tests delivered by community organizations and local public health departments to reach people with the disease earlier in South Carolina.

A disproportionate number of minorities fail to get vaccinated against **flu and pneumonia**. DHEC provides health care provider education, community and coalition collaborations to establish nontraditional vaccination sites, reminder/recall interventions, and the use of standing orders to increase community demand for and access to influenza and pneumococcal immunizations.

A promising practice to address health disparities in minority communities is to engage churches and build their capacity to plan and implement health initiatives. The "Protect Your Body...Your Temple" Senior Immunization Initiative is an expansion of a faith-based health promotion campaign developed by the Office of Minority Health and includes the development and statewide dissemination of church bulletin inserts with flu/pneumonia prevention and vaccine messages.

Diabetes is increasing, with the most dramatic increase among black men. The CDC funds DHEC's efforts to work with high-risk populations disproportionately burdened by the disease. Since diabetes affects the entire body, health promotion efforts focus on wellness, physical activity, weight and blood pressure control and smoking cessation.

Disparities in **cancer** rates continue despite a decline in overall cancer rates. DHEC is expanding collaborations to further address cancer among minorities, including a strong focus on prostate cancer with **Real Men Checkin' It Out**, a prostate cancer education and screening program targeting African-American males.

The **infant death rate** and the percent of **low birthweight** babies are twice as high among blacks than whites in the state. DHEC in partnership with other organizations is developing and implementing strategies to reduce these disparities.

ADDITIONAL RESOURCES

American Cancer Society
http://www.cancer.org

Centers for Disease Control and Prevention
Office of Minority Health
http://www.cdc.gov/omh/default.htm

National Institutes of Health
http://www.nih.gov/

South Carolina Department of Health and Environmental Control
Office of Minority Health
http://www.scdhec.gov/health/minority

Protect, Enhance and Sustain Environmental and Coastal Resources

There are times when DHEC's role in protecting the health of citizens and the environment is front-page news. The events in Graniteville early in 2005 tested the preparation of all responders to health and environmental emergencies. DHEC response to catastrophic events and natural disasters overshadows the daily challenges of emergency response staff who are on call every day to respond to spills, accidents and fish kills across the state. These same people also do the day-to-day work required to reduce the impact our daily activities have on the quality of our environment and our sensitive coastal ecosystems.

DHEC RESPONDS TO ENVIRONMENTAL EMERGENCIES

DHEC is dedicated to protecting the state's citizens and preserving the environment. Preparing for an appropriate response to a major chemical release, radiological release, terrorism or natural disaster requires trained people and the tools to respond safely and effectively. On occasions where hazardous substances (chemicals or radiological materials) are released as a result of an industrial accident, transportation incident or natural disaster, DHEC must quickly minimize the environmental damage and threat to the public and begin recovery efforts as soon as possible. This responsibility for response, containment and cleanup operations requires maintaining staff proficiency, equipment and supplies appropriate for prevention planning, emergency response activities and technical assistance to local and other state/federal entities.

In the event of a natural disaster, DHEC has staff who address onsite emergency issues such as leaking chemical tanks, radiological material releases, damaged water/wastewater treatment facilities and delivery infrastructures. In addition, staff members represent DHEC in state, local, and other state/federal emergency operations centers to provide expertise and coordinated response to technical issues that arise in joint response and restoration/recovery/mitigation decisions.

The public can notify DHEC about any actual or possible release of pollutants into the environment, including dumping, spills and releases of hazardous substances, fish kills and illegal open burning of items such as tires, plastic and asbestos, using the toll-free 24-hour reporting line at 1-888-481-0125.

In 2005, DHEC responded to 113 hazardous material spills, 576 oil spills and 179 other spills and 56 fish kills. Staff also responded to 24 radiological incidents and participated in 63 exercises. There were more than 1,100 calls into the 24-hour emergency response line.

http://www.scdhec.gov/eqc/lwm/html/reporting.html

ENVIRONMENTAL

DHEC WORKS WITH CITIES, TOWNS ON SEPTIC SYSTEMS

Following years of concerted effort by DHEC coastal and environmental health staff with city staff, the City of Folly Beach passed a comprehensive **septic system** inspection and maintenance ordinance in June 2005. In addition to working with Folly Beach, DHEC provided Edisto Beach, McClellanville, Mt. Pleasant and Hilton Head technical consulting, sample ordinances and other on-site management information. DHEC has developed and will distribute a Septic System Management Tool Kit CD to all coastal local governments to encourage and support local efforts to manage septic systems and will continue to offer septic system inspector training.

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HAZARDOUS WASTE CLEANUP NEEDS FUNDING

The **Hazardous Waste Contingency Fund** is used to address uncontrolled or abandoned waste sites where there are no other available funds to conduct response actions. Previous funding for these activities came from fees on waste disposal at the Saftey-Kleen Pinewood landfill, which stopped accepting waste in September 2000.

DHEC is working with the General Assembly to secure a sustained and continuous source of funding to enable the agency to continue to prioritize, assess and clean up contaminated sites, implement the Brownfields/Voluntary Cleanup Program, and respond to immediate threats from sites.

Staff work on approximately 100 sites a year; however, this program maintains a list of more than 900 sites that are contaminated or potentially contaminated by hazardous substances. Staff supported by this fund are also responsible for implementing the Brownfields Program, which, to date, has entered into 85 nonresponsible party contracts to revitalize more than 3,000 acres, has created approximately 775 new jobs, and represents a total investment of nearly $75 million in the revitalization of these sites. For more on brownfields, see Pages 14-15.

http://www.scdhec.gov/lwm/html/vcp_info.html

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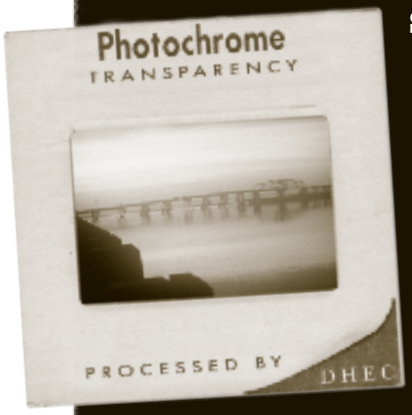
DHEC PROTECTS THE SAFETY, BEAUTY OF COASTAL WATERWAYS

In 2005, DHEC received federal funds to continue its effort to keep South Carolina's coastal waterways safe and beautiful by removing **marine debris**.

Countless abandoned vessels and other debris litter the coast and present serious navigational hazards for boaters. Vessels and debris may also leak oil and other contaminants that can harm shellfish and other wildlife. Many times each year, state and federal agencies receive requests to remove sunken and/or abandoned derelict vessels and other debris. After enforcement options have been exhausted or if the responsible party cannot be identified, DHEC provides funding to have the debris removed and disposed of properly.

DHEC received an initial grant in September 2004 from the National Oceanic and Atmospheric Administration (NOAA) to begin implementing a marine debris and abandoned vessel removal project in the Charleston Harbor Area. DHEC convened a Marine Debris and Abandoned Vessel Removal Task Force made

REASONABLE ACCESS TO COASTAL ISLANDS DISCUSSED



South Carolina's coastline is dotted with more than 3,500 **coastal islands**. These islands are relatively small and generally lie behind the barrier islands and around Sea Islands. Following an S.C. Supreme Court ruling that nullified agency regulations on building bridges to these islands, DHEC assembled a committee of six representatives from various stakeholder groups including developers, conservationists and legal professionals. Through a consensus-driven negotiation process, this committee produced comprehensive recommendations to protect and provide reasonable access to coastal islands. The DHEC board unanimously approved the recommendations and adopted them into emergency regulation. They will be considered by the General Assembly in 2006.

http://www.scdhec.gov/environment/ocrm/outreach/marshislands.htm

up of state and federal agencies to manage removal operations at 17 major debris sites and to raise public awareness about the problem.

DHEC will kick off Phase II of the program in early 2006 with 20 additional removal operations in the Beaufort and Charleston areas. The agency will also be providing cost-sharing grant opportunities for local municipalities to leverage support for additional debris removal operations.

http://www.scdhec.gov/environment/ocrm/outreach/debris.htm

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CLEAN VESSEL ACT GRANTS HELP REDUCE HUMAN WASTE FROM BOATS

Since 1993, DHEC has administered the **S.C. Clean Vessel/Marine Pumpout program** under the Clean Vessel Act of 1992. This program strives to provide adequate pumpout services to marinas and the general public within the eight coastal counties as well as several inland areas.

In 2005, DHEC received federal funds to expand its grant outreach efforts. To date, DHEC has provided partnership grants to purchase 17 pumpout boats, 31 fixed units and seven portable units. In addition, grants have been awarded to renovate 33 pumpout facilities and to provide 54 operations and maintenance contracts for pumpout facilities on coastal and inland marinas and creeks.

http://www.scdhec.gov/environment/ocrm/outreach/cva.htm

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GRANT PROGRAM HELPS ADDRESS COASTAL NONPOINT SOURCE POLLUTION ISSUES

The **S.C. Coastal Nonpoint Program (S.C. CNP)**, in partnership with NOAA, initiated a Capacity Building Grant for Local Governments in 2004 to provide incentives and financial assistance for municipalities to proactively address **nonpoint source pollution** issues and educate the public on needed policy changes. Nonpoint source pollution, or polluted runoff, occurs when stormwater carries pollutants such as fertilizers, pesticides and fecal matter into water bodies. Improperly operating septic tank systems also contribute to nonpoint source pollution.

In 2005, the Coastal Nonpoint Program funded projects that focused on the development of on-site disposal system (septic tanks) model ordinances, maintenance and inspection programs, and public education initiatives. One of these projects, directed by the Sewee to Santee Community Development Corp., is concentrating on on-site disposal system-related issues in the rural northeastern portion of Charleston County. The corporation has enlisted the help of local students, training them to interview property owners and evaluate septic tank site conditions at approximately 100 homes in the Sewee to Santee region. In addition,

STAFF CONDUCTS LEAD POISONING AWARENESS

In the fall of 2005, DHEC staff, along with experts from the Centers for Disease Control and Prevention (CDC) and the U.S. Environmental Protection Agency, conducted community awareness in the Midlands on the hazards of **lead** in the environment. Virtually all Americans have lead in their blood because of our history of having lead in paint, gasoline and job- and hobby-related exposure. Many products, such as miniblinds, jewelry, faucets, and some toys, dishes and crystal, also contain lead.

The federal government banned lead in paint in 1978, and lead in gasoline began to be phased out in the 1980s when the long-term exposure hazards, particularly among children, became known. While many homes built before 1950 continue to be a source of lead paint, the U.S. has seen an 88 percent decline in children with elevated blood lead levels and a similar drop in the general population because of the reduced amount in the environment.

While not a major source of lead poisoning, lead in drinking water also can be reduced.

Groundwater in the Midlands is corrosive and can pull lead out of the solder between pipe joints and faucets in homes. DHEC cannot make residents replace their plumbing, but it can require water systems to explore ways to reduce the amount of lead getting into drinking water. Residents also can reduce their risk by running faucets a full minute after water has been sitting unused for several hours.

Other sources of lead still plague South Carolina's children. Lead poisoning is entirely preventable and, in most cases, goes unnoticed until its long-term effects, including brain damage, mental retardation, learning disabilities, developmental delay and behavioral and attention problems, are evident. The main sources of lead in South Carolina are related to contaminated soil and dust and chipping lead-based paint in older houses, particularly those built before 1950. Certain occupations/vocations, such as those related to battery manufacture and hobbies or crafts involving the use of lead, such as stained glass and ceramics, also present higher risks of exposure. Some children have also been poisoned by imported vinyl mini-blinds.

DHEC screens children for lead poisoning and promotes prevention messages through the media and with parents. From 1999-2004, there were 2,230 South Carolina children under 6 years old with confirmed blood levels of greater than 10 micrograms per deciliter, the level of concern specified by the CDC.

http://www.scdhec.gov/lead

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well water samples have been collected at these homes and are being analyzed for fecal contamination. The project is ongoing, and the corporation's efforts have resulted in significant public participation by residents and students.

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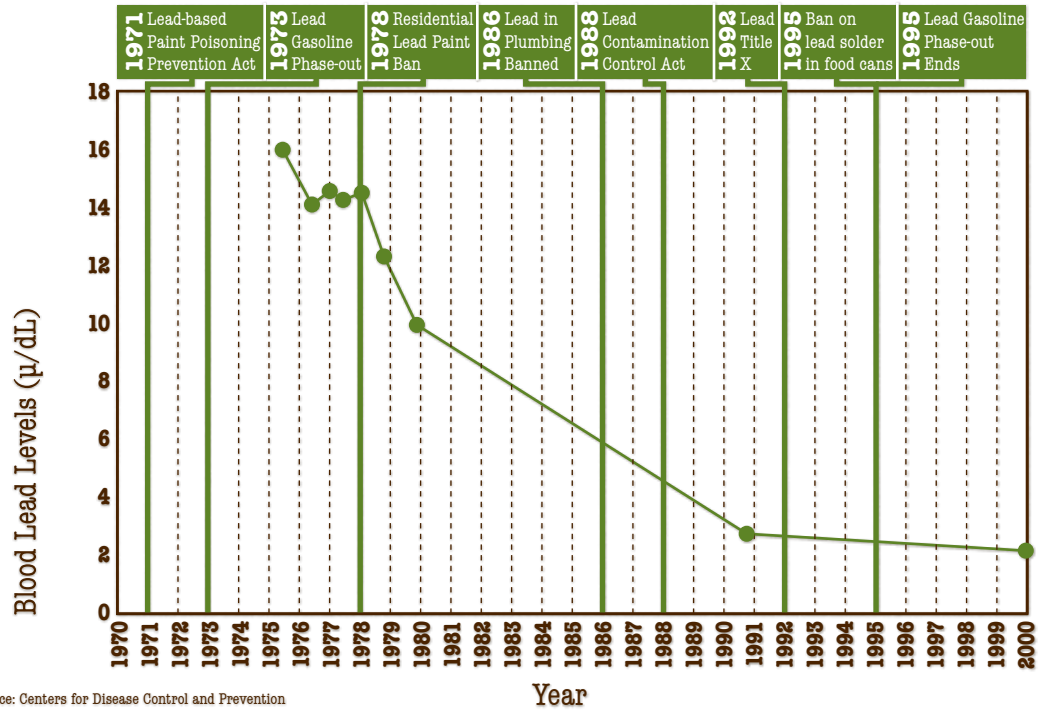
CITIES MUST MANAGE STORMWATER

Polluted **stormwater runoff** from South Carolina's towns and cities continues to impact urban and suburban lakes, creeks and streams. This polluted runoff can contain pet waste, motor oil, fertilizers, pesticides and other contaminants that are left on roads, sidewalks and other hard surfaces. When it rains, these pollutants are washed into storm drains and out to local waterways. This can lead to water bodies being placed on the "impaired waters" list of those waters not meeting their designated uses. For more on impaired waters, see Pages 16-17.

To reduce impacts of stormwater runoff from **Municipal Separate Storm Sewer Systems (MS4s)** of small-sized towns and cities, a new EPA program will soon be in place in South Carolina. This new

Impact of Lead Poisoning Prevention Policy on Reducing Children's Blood Lead Levels



Data source: Centers for Disease Control and Prevention

MIDLANDS STUDENTS BREATHING BETTER AIR

One Midlands school has improved air quality through a new DHEC program – B²@ school. Crossroads Middle School teachers and students studying air quality made simple changes that improved air quality in student drop-off and pick-up areas. The school's new policy asks that drivers waiting on riders voluntarily turn off their cars, weather permitting.

The **B² @ school/ Breathe Better Air** program focuses on air emission reductions for a healthier environment around the school community. The interactive program encourages school, parent and community participation to help improve transportation issues that affect air quality.

For their efforts, Crossroads Middle School received a "Champions of the Environment" grant to help further implement the program. The award allowed them to purchase "No Idling" signs for the campus.

http://www.scdhec.gov/baq

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rule requires operators of MS4s in urban areas to implement programs and practices to better control polluted stormwater runoff. These programs and practices will include public education and outreach, construction site stormwater runoff control, post-construction stormwater management in new development and redevelopment, pollution prevention/good housekeeping for municipal operations, public involvement and illicit discharge detection and elimination. Communities also can improve water quality by enacting and implementing vegetated buffer ordinances. Vegetated buffers provide a strip of vegetation along a water body to filter pollutants, slow the flow and reduce the volume of the runoff, and hold soil in place. Vegetated buffers provide an effective solution for cities and towns looking for ways to reduce the impact of stormwater runoff.

http://www.scdhec.gov/eqc/water/html/swnms4page.html.

VEHICLES CONTRIBUTE TO AIR POLLUTION

Mobile sources – cars, trucks and buses – contribute a significant portion of the pollutants that lead to ground-level **ozone** and **particle** formation. Ground-level ozone is a gas formed in the atmosphere by reactions involving nitrogen oxides (NOx) and volatile organic compounds (VOCs) in the presence of heat and sunlight. Particles in the air including dust, dirt, soot, smoke and liquid droplets can cause respiratory problems. DHEC works with state and federal partners to regulate and track air pollution emissions from mobile sources. DHEC also works with the S.C. Department of Transportation (SCDOT) to publicize ozone forecasts. On days when the forecast shows the potential for high ozone concentrations, SCDOT uses its roadside signs to inform the public of the forecast and encourage the use of carpools.

DHEC tracks reductions in emissions attributable to the phased implementation of federal regulations designed to improve mobile source air pollution. The EPA develops and implements nationwide standards for fuels and automobiles, heavy-duty diesel engines, and other mobile sources to reduce pollutants from these sources. The Clean Air

ENVIRONMENT

DHEC ENCOURAGES COASTAL PET OWNERS TO 'SCOOP THE POOP'

DHEC launched a campaign in 2005 to encourage Charleston-area pet owners to clean up after their pets. Dogs and cats in Charleston can produce more than 10,000 pounds of waste every day. This waste can wash into storm drains and go directly into waterways without being treated. Pet waste can also wash directly into marshes and creeks, where it can adversely affect shellfish and other plants and animals.

Posters placed in pet parks, stores and veterinary clinics feature an amusing virtual "line-up" of pet offenders and simple tips for pet owners to follow to keep their pet's waste from affecting coastal water quality. Poster tips include:

- Scoop the poop. Take a plastic bag with you on your walk.
- Wrap pet waste in a plastic bag and put it into the trash.
- Flush pet waste down the toilet (if you are on a public sewer). Do NOT flush kitty litter.
- Bury pet waste in your yard. Bury it 6 inches deep, away from waterways and gardens.
- Don't put pet waste in the compost pile.

http://www.scdhec.gov/environment/ocrm/outreach/scoop.htm

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Act Amendments of 1990 created several federal programs that affect mobile source air pollution. Light and heavy-duty vehicle engines have to meet increasingly stringent emission control requirements, and automobile manufacturers have to meet increasing corporate fuel economy requirements. EPA requires less volatile gasoline during summer months to reduce evaporation and specifies maximum sulfur content for diesel fuel. All of these new requirements are scheduled to be completely implemented across the country by 2010 and are expected to help reduce impacts from both local vehicles and pollutants that are transported long distances.

DHEC works with local governments and other partners to pursue grants and other means to address both on-road and off-road mobile source emissions. The state Department of Education, in partnership with DHEC, will use almost $2 million of grant and supplementary funds secured from other sources to retrofit diesel engines in the majority of state school buses to improve efficiency and reduce emissions of particulate matter, hydrocarbons and carbon monoxide. Several school districts will begin an excessive-idling awareness campaign at elementary and middle schools to reduce emissions around schools.

DHEC also promotes alternatives to commuting.

COMPUTERS CONTRIBUTE TO ENERGY CONSUMPTION

Prompted by DHEC employees' cost savings program suggestions, the agency raised awareness of desktop computer **energy consumption** and instructed that they be turned off at the end of each workday. DHEC's Bureau of Air Quality has installed an EPA-developed program on computers that automatically places them in a low-power sleep mode after 10 minutes of inactivity. Plans are to install this software on other DHEC networks. As of April 2005, the program had saved 28 percent in electricity costs for monitors. But, more important, the program results in reduced air emissions from utilities that serve our area.

http://www.energystar.gov/

The **"Take a Break from the Exhaust"** program has expanded. Staff from three bureaus within DHEC and the S.C. State Energy Office started using the program in 2005. The program also attracted attention in other states: The Wisconsin Department of Natural Resources also started using the program in 2005. This brought the total number of participants to 278, resulting in almost 290,000 vehicle miles saved and an estimated 690 pounds of NOx and 1,100 pounds of VOCs reduced. The SCDOT's **SmartRide** Commuter-Focused Transit Program in the Columbia area is another good example of a commuting alternative that has proven that commuters will park their cars to reduce emissions and lessen congestion. Alternative work schedules, including four-day workweeks and telecommuting, can reduce the need to commute. DHEC's Bureau of Air Quality has been designated a "Best Workplace for Commuters," a program established by EPA and the U.S. Department of Transportation to recognize employers who meet a stringent set of standards for providing commuting alternatives. For more on air quality, see Pages 9-10.

http://www.scdot.org/getting/SmartRide/smartride.shtml
http://www.bwc.gov
http://www.scdhec.gov/baq

OPEN BURNING RULES REVISED

A state regulation banning **open burning** has been revised to seek additional nitrogen oxide (NOx) and volatile organic compound (VOC) reductions. The revisions removed all exemptions for burning household trash, revised the exemption for burning construction waste, and revised the exemption for fires set for firefighter training.

Based on DHEC's latest air emissions inventory, burning household waste generates approximately 2,400 tons of NOx and 12,100 tons of VOCs each year. Smoke places many different pollutants into the air, and the ash from open burning can lead to possible soil and water contamination. Open burning can also become a nuisance and impact the health of neighbors, especially those with respiratory conditions, such as asthma.

The revisions allow residential construction waste to be burned only if certain provisions are met. Only clean lumber can be burned and only outside of the ozone season (May 1 through Sept. 30). Burning construction waste not associated with the building and construction of one- and two-family dwellings is strictly prohibited. These revisions should result in annual reductions of approximately 150 tons of NOx and 600 tons of particulate.

The reductions from these regulations are quantifiable, permanent and will ensure that South Carolina obtains and maintains cleaner air sooner than would be required by federal rules.

http://www.scdhec.gov/eqc/baq/html/eap_sip.html

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DHEC RESPONDS TO ILLEGAL DUMPING OF SOLID WASTE

Every day South Carolinians generate more than 14,000 tons of solid waste including household garbage, appliances, construction and demolition debris, land clearing debris, appliances and tires. Although we recycle about 20 percent of the waste, not all of the remainder is disposed of properly.

In South Carolina, solid waste disposal is regulated under the Solid Waste Policy and Management Act. The act encourages recycling and directs waste that is not recyclable to be disposed of at a DHEC-approved landfill. Unfortunately, solid wastes are sometimes illegally dumped. Citizens and law enforcement officers report these incidents of illegal or **open dumping** of solid waste to DHEC. If the incident is not resolved by the local DHEC office, it is referred to the Solid Waste Review Group (SWRG), which determines what further action is needed.

During fiscal year 2005, approximately 1,200 various complaints of open dumping were reported to DHEC. The majority of complaints concerned illegal construction, demolition debris and land clearing sites. Compliance assistance, in which DHEC staff work with the responsible parties or property owners to get the debris removed, resulted in cleanup of five sites. DHEC staff initiated civil enforcement actions against five other sites. DHEC's criminal investigators focused on the larger landfill-like sites and repeat offenders. They received 74 cases from the SWRG, issued 22 arrest warrants, and obtained 20 convictions during the fiscal year. Other cases are pending.

ADDITIONAL RESOURCES

U.S. Army Corps of Engineers Charleston District
http://www.sac.usace.army.mil/

S.C. Estuarine and Coastal Assessment Program
http://www.dnr.state.sc.us/marine/scecap/

National Coastal Assessment Program
http://www.epa.gov/emap/nca/

ONGOING CHALLENGES, NEW APPROACHES SOLID WASTE

Responding to a major chemical release, radiological release, terrorism or natural disaster requires a trained staff equipped with the necessary tools to protect the public. DHEC staff respond each year to a growing number of **environmental emergencies**.

Staff work on approximately 100 abandoned or uncontrolled **hazardous waste** sites a year; however, the agency maintains a list of more than 900 of these sites. DHEC is working with the General Assembly to find a funding source to address the cleanup of these sites.

Marine debris continues to clog the state's coastal waterways. DHEC, with federal funding, continues efforts to remove these safety hazards.

Also with federal funding, DHEC continues its efforts to provide **pumpout** facilities for boaters.

DHEC staff continue working with local governments to address their **nonpoint source pollution** issues, including **stormwater runoff**.

Air quality continues improvement through initiatives such as reducing open burning.

A criminal investigation unit continues its efforts to rid the state of unsightly **open dumping** areas and to prosecute violators.

http://www.scdhec.gov/lwm

Improve Organizational Capacity and Quality

Emerging new threats such as avian influenza (bird flu), West Nile virus and SARS as well as the need to boost homeland security point to the need for a well-prepared public health system and work force. Public health workers and programs are critical resources for meeting present and future threats. Staff must have access to current technology and training to improve and support health and environmental services. DHEC also develops and periodically reviews its plans to ensure that staff work efficiently and on those program activities that result in the greatest public health and environmental benefit.

South Carolina Department of Health and Environmental Control

STRATEGIC PLAN 2005 - 2010

STRATEGIC PLANNING SETS COURSE FOR IMPROVING PUBLIC HEALTH

DHEC's **Strategic Plan** 2005-2010 reaffirms the agency mission and vision for all staff, provides guiding principles in defining our values that describe how we conduct ourselves, and sets five-year goals.

The agency vision is "healthy people living in healthy communities." The mission is "We promote and protect the health of the public and the environment."

DHEC defines its values as:

- Customer Service
- Excellence in Government
- Use of Applied Scientific Knowledge for Decision-making
- Local Solutions to Local Problems
- Cultural Competence
- Teamwork
- Our Employees

The agency's broad goals are:

Goal 1: Increase support to and involvement by communities in developing healthy and environmentally sound communities.

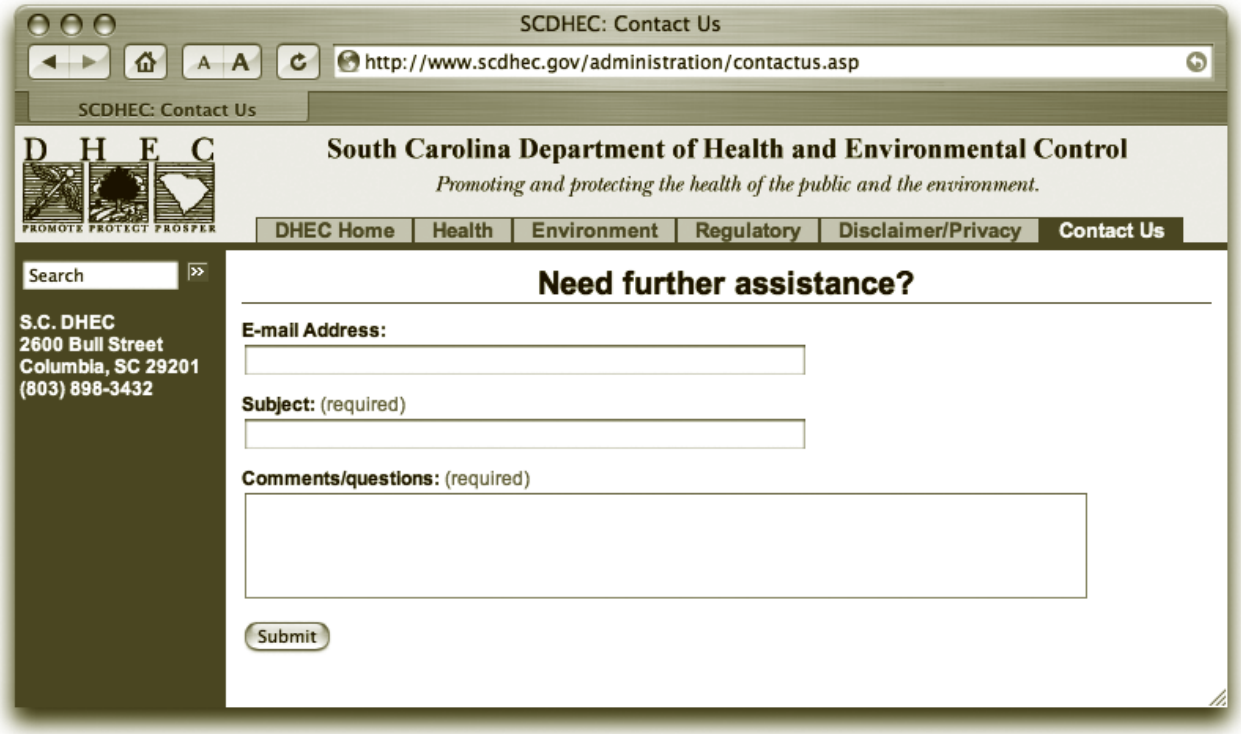
Goal 2: Improve the quality and years of healthy life for all.

Goal 3: Eliminate health disparities.

Goal 4: Protect, enhance and sustain environmental and coastal resources.

Goal 5: Improve organizational capacity and quality.

ORGANIZATIONAL CAPACITY



DHEC RESPONDS TO CUSTOMER NEEDS

A key agency value is customer service – meeting our customers' needs and providing quality service. DHEC has measured **customer satisfaction** for the past six years and has statewide trend data for 1998-2004 on familiarity with DHEC; use of services; overall satisfaction with the quality of service; satisfaction with specific aspects of service, such as waiting time, courtesy and attitude; staff competence/ability to answer questions; and accessibility. DHEC has a positive public image, and, overall, South Carolinians are satisfied with the services the agency provides. Customer service is assessed at every level of the agency and in all customer groups.

DHEC uses customer feedback to continuously improve its operations. Data from various customer satisfaction assessments is reported to the board, executive management team and agency employees for evaluation, follow-up and action. Through this continuous quality improvement process, policies, practices and procedures are changed, as appropriate, to more effectively meet the needs of customers and stakeholders. Examples of these efforts include:

- A director of constituent services has been appointed to handle customer issues by providing a central point of contact, responding in a timely manner and identifying possible trends.
- Comments from businesses and industries that apply to DHEC for environmental permits are compiled and a report is submitted quarterly to each of the Environmental Quality Control bureaus. Process improvements reflecting the comments are discussed at the permit directors' cross-media work group for review and appropriate improvements.
- Changing of clinic layouts, signage, hours of operation, location of services and flexible appointment systems are often based on customer feedback and funding availability.

IMPROVING INFORMATION FOR STAFF, PUBLIC

To keep pace with the ever-changing world of **information technology**, DHEC must constantly enhance its information systems and make sure access to timely and accurate information is available to both staff and the communities we serve. Staff access to electronic technology has steadily increased since 2000 when only 74.7 percent of staff had access to the Internet/Intranet, and 73.7 percent had access to GroupWise, DHEC's electronic mail system. By fiscal year 2005, 94 percent of staff had access to the Internet/Intranet, and 97 percent had access to GroupWise.

In 2005, DHEC continued to enhance its use of many automated systems and processes to select and analyze data and information. Priorities still include accessing and distributing public health information and emergency health alerts; detecting emerging public health and environmental problems; monitoring the health of communities; supporting organizational capacity and quality; and measuring the strategic plan.

Examples include:

- The Client Automated Record and Encounter System (CARES), the first statewide public health information system in the nation with client-centered clinical information, is being used in all 46 South Carolina counties. More than 4.5 million

client records can be accessed from anywhere in the state by more than 2,000 users. Modules are being added that will greatly enhance DHEC's ability to manage its work force and provide an optimum level of clinical services within its resource constraints.

- The National Electronic Disease Surveillance System (NEDSS) is being implemented to better manage and enhance the large number of current surveillance systems and to allow the public health community to respond more quickly to public health threats, including bioterrorism. This system is allowing DHEC to move from a paper to an electronic system that will improve efficiency and effectiveness. When completed, NEDSS will electronically integrate and link a wide variety of surveillance activities and will allow for more accurate and timely reporting of disease information from health providers to the states and, ultimately, to and from the Centers for Disease Control and Prevention.

- The Carolina's Health Electronic Surveillance System (CHESS), South Carolina's version of NEDSS, is now used in all eight DHEC regions. The system improves the ability of public health agencies and organizations to receive and electronically process information about reportable diseases.

- The S.C. Community Assessment Network (SCAN), which allows the public to access data online, including birth, death and disease information, was expanded in 2005 to include information on Childhood Lead Poisoning Prevention. (http://scangis.dhec.sc.gov/scan)

- Geographic Information System

(GIS) continues to be enhanced for permitting, emergency response activities, disease surveillance and health services. More than 40 environmental layers are now available and are used within DHEC as well as by many others, including the S.C. Department of Natural Resources, S.C. Parks, Recreation and Tourism, S.C. Emergency Management Division, S.C. Forestry Commission, the U.S. Environmental Protection Agency, the University of South Carolina, Clemson University and the public.

- The Shared and Integrated Geographic Information System (SIGIS) provides managers and policymakers with systems and applications that help them to better analyze environmental and public health information. SIGIS provides GIS and related services, including desktop applications, Intranet and Internet mapping capabilities, and a data server, which provides the public the ability to download GIS information.

- DHEC has designed systems to trigger and accomplish immediate business actions. One example is S.C. Vital Record and Statistics Integrated Information System (SCVRSIIS), an online, Web-based system to register vital information including live births, fetal deaths and deaths.

STAFF DEVELOPMENT BETTER SERVES THE PUBLIC

Because DHEC makes decisions that affect health and the environment, a first-rate team of professionals is essential.

Workforce Development

Training and retention of staff are key issues for DHEC. Training needs are assessed each year by each unit, program and discipline to plan for staff development. DHEC strengthens leadership and management skills by providing structured leadership and management curricula to staff. By the end of 2005, 222 staff had graduated from the Management Academy at the University of North Carolina and 43 had graduated from the Southeastern Public Health Leadership Institute. DHEC also supports staff development through annual participation in the S.C. Executive Institute, the Certified Public Manager Program and Leadership South Carolina and for the first time had two scholars attend the Environmental Public Health Leadership Institute.

PERFORMANCE MANAGEMENT SYSTEM TO IMPROVE PROCESS

To directly support the implementation of the new DHEC Strategic Plan, the Health Services Deputy area is implementing a Performance Management System (PMS). Modeled after the framework developed by the National Turning Point Performance Management Excellence Collaborative, Health Services PMS will implement a quality improvement process looking at all aspects of its operations to include:

- Management
- Human Resources
- Data and Information Systems
- Public Health Capacity
- Financial Systems
- Customer Focus and Satisfaction
- Health Status Results

Within each of these categories, standards will be established, performance indicators developed and monitored, and a quality improvement expectation placed on all managers and staff to improve their operations, based on their careful assessment of the data. The system will begin to be implemented in Summer 2006.

For public health preparedness, a matrix of competency-based training is available online so staff can identify training based on their needs. The Academy of Public Health Preparedness within the University of South Carolina (USC) Norman J. Arnold School of Public Health continues to train key DHEC staff along with community partners.

To improve its overall public health work force capacity, DHEC is partnering with the USC Arnold School of Public Health to develop training and curricula that address key competency issues. The plan is to offer, beginning in 2006, a graduate level Certificate in Public Health and a Certificate in Public Health Practice, for both DHEC staff and public health professionals working in other agencies and organizations. To prepare for these certificates, trainings in 2005 addressed Introduction to Public Health, Collaborative Leadership, and Data Use and Interpretation. The agency is integrating technology, content and distance learning to make learning more easily accessible and more cost-effective. Video conferencing, courses on video and CD-ROM, and Web-based training are available.

Capacity Building

As of June 1, 2005, DHEC had 482 employees participating in the TERI retirement program. The agency continues to replace retiring management positions. To date, approximately 120 staff members have participated in the Environmental Quality Control's **Capacity Building** project, which prepares staff for management positions. EQC is preparing to launch the next phase so that every employee in the EQC deputy area will have an opportunity to participate in this program. The S.C. Office of Human Resources has recognized the project with an Excellence in Human Resources Award.

DHEC's Health Services area has a Health Services Workforce Continuity and Development Plan to be implemented this fall. Strategies include mentoring, coaching, job shadowing, leadership training and development, job rotation, core public health training, formal academic training and improved recruitment and selection processes.

EMPLOYEE WELLNESS

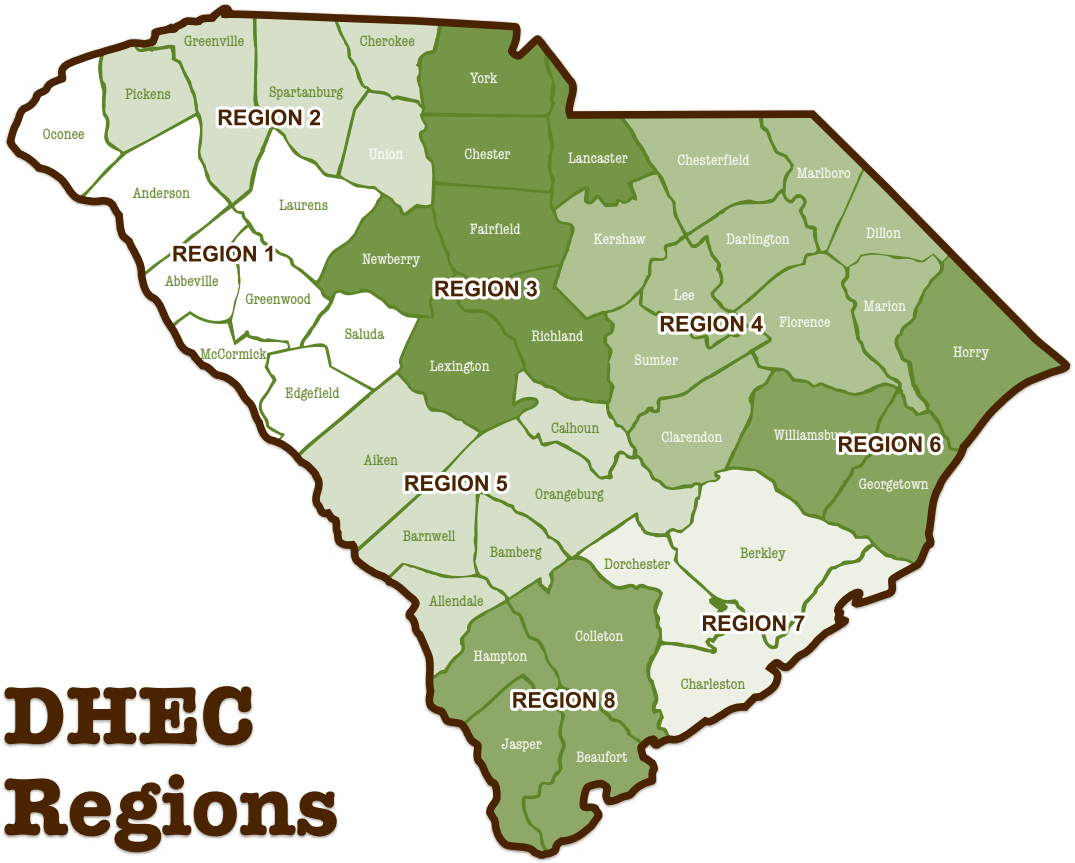
The **Capital Health Campaign**, initially targeting the DHEC work force and focusing on behaviors that reduce the risk of chronic disease later in life, is being implemented in the agency in a pilot phase. The program has a strong evaluation component and will attempt to demonstrate improvement in risk factors among program participants. The plan is to offer the program to the entire DHEC work force over time and to other state agencies, as it is able to demonstrate program effectiveness and cost savings. For more on Capital Health, see Page 19.

IMPROVING THE WAY WE DO BUSINESS

DHEC makes every effort to increase productivity, reduce waste and duplication and improve the quality of services provided to

our customers. Accomplishments in 2005 include the following:

- DHEC has consolidated its 12 district offices into eight regions to streamline administration and improve efficiencies. The move will generate a cost savings, increase accountability and renew the agency's focus on customer service. While the move will affect management of the areas, it will not affect DHEC's 46 county public health department offices or the health and environmental services provided to the public.
- DHEC's Public Health Informatics committee provides guidance on DHEC's future data systems and information services initiatives. The committee has previewed all existing major public health systems and data sources and has developed an overall public health informatics infrastructure, including data systems integration, standards, confidentiality and security around the agency.
- The Office of Internal Audits (OIA) reviews agency programs. Employees are asked each year for input into the agency's Annual Internal Audit Plan. During fiscal year 2005, OIA issued seven audit reports. The internal audits identified areas where the agency could improve operations, strengthen internal controls and save or recoup costs. All internal audit recommendations from calendar years 1995 through 2003 have been implemented. This shows a serious commitment by DHEC to make positive changes in the agency.



DHEC Regions

FEDERAL BUDGET CUTS LOOM

DHEC continues to promote and protect the health of the public and the environment in the most effective and efficient manner while trying to maintain current levels of service and progress in spite of reduced state and federal funding. Congressional funding does not appear promising for future important public health initiatives.

Congress is recommending significant cuts in the Preventive Health and Health Services Block Grant, Maternal and Child Health – Title V Block Grant, the Centers for Disease Control and Prevention – Public Health Preparedness and Response to Bioterrorism Grant, and from the Environmental Protection Agency and the National Oceanic and Atmospheric Administration. Cuts in these programs will have noticeable, adverse impacts on DHEC's ability to address public health threats. Reductions to the agency's base budget make it difficult to maintain core performance efforts, diminish field presence, increase response time, and decrease the agency's ability to support communities and citizens

Funding is needed to assure and sustain a competent work force, particularly in the high-demand, hard-to-fill positions such as

nursing and environmental scientists/managers. Other critical positions, such as nutritionists, social workers and information systems personnel, are essential to protect the public's health and the environment and to respond to emergencies. Lack of a competitive structure to replace staff and the growing proportion of experienced staff nearing retirement further impact the agency's ability to carry out its mission in providing essential and mandated public health services.

ONGOING CHALLENGES, NEW APPROACHES

DHEC continues to assess **customer satisfaction** yearly and makes improvements based on customer feedback.

Enhancing **information technology** focuses on accessing and distributing public health information and emergency health alerts; detecting emerging public health and environmental problems; monitoring the health of communities; supporting organizational capacity and quality; and measuring the strategic plan.

DHEC and the USC Norman J. Arnold School of Public Health collaborate to improve the public health work force through **training** and curricula that address key competencies.

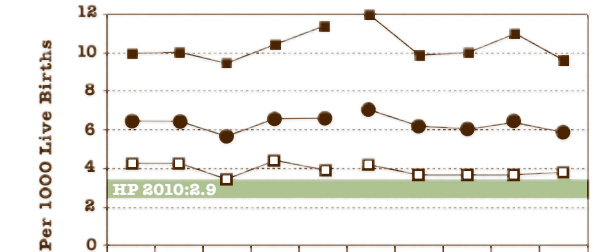
To increase productivity, reduce waste and duplication and improve the quality of **DHEC** services provided to our customers, staff continually review the way we do business. Toward that end, the 12 districts were consolidated in 2005 into eight regions.

The federal government is recommending significant **funding cuts** that will have noticeable, adverse impacts on DHEC's ability to address public health threats. These reductions along with the impact of state budget cuts over the past few years make it difficult to maintain core performance efforts, diminish field presence, increase response time, and decrease the agency's ability to support communities and citizens.

Appendix A

Collecting and analyzing data on health indicators allows South Carolina to detect trends, such as a rise in the numbers of disease or death occurring in a community that should be addressed through programs or interventions. Likewise, if a trend analysis shows improvement, it helps determine what is working. Appendix A: South Carolina Data continues the graphic presentation of trends that DHEC has been presenting in its annual reports since 1997. The data is presented by six groups: pregnant women and infants; children birth to 14; teens; young adults ages 20-44; adults 45-64; and mature adults 65 and older. The health indicators presented are the leading causes of death or hospitalization in each age group or are other public health issues of emerging concern.

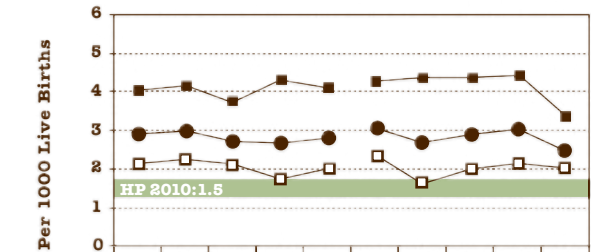
Neonatal* Death Rates
By Race



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	4.4	4.4	3.4	4.5	3.9	4.4	3.8	3.8	3.8	3.9
Black & Other	9.8	9.9	9.3	10.6	11.4	12.0	9.9	10.1	11.0	9.6
Total	6.5	6.4	5.6	6.7	6.7	7.2	6.1	6.0	6.4	5.9

*Neonatal deaths occur within the first 28 days of life.
Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

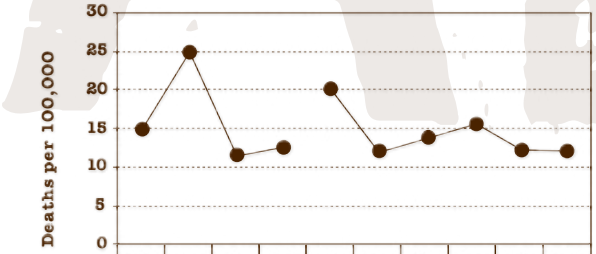
Postneonatal* Death Rates
By Race



	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
White	2.2	2.3	2.1	1.8	2.1	2.4	1.6	2.0	2.1	1.9
Black & Other	4	4.1	3.7	4.4	4.1	4.4	4.4	4.4	4.5	3.3
Total	2.9	3	2.7	2.7	2.8	3.1	2.6	2.9	3.0	2.4

*Postneonatal deaths occur from 28 days to 1 year of life
Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

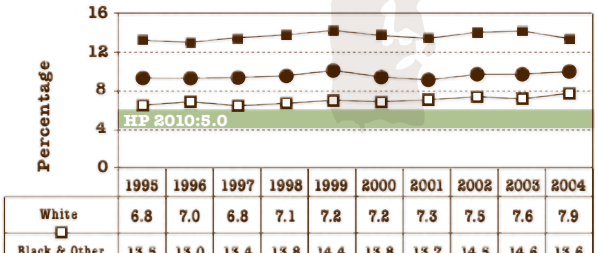
Child Accidents Death Rates
Ages 1-4



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	14.9	25.5	11.3	12.3	20.7	11.8	13.5	15.5	12.2	12.0

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

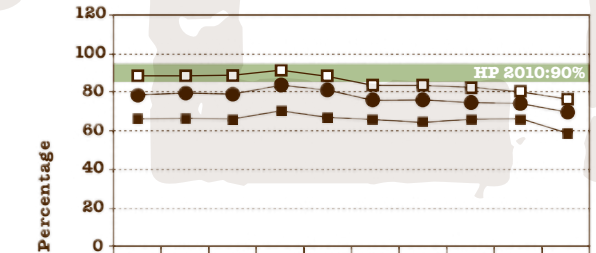
Percentage of Low Birth Weight Infants (<2500 grams)
By Race



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	6.8	7.0	6.8	7.1	7.2	7.2	7.3	7.5	7.6	7.9
Black & Other	13.5	13.0	13.4	13.8	14.4	13.8	13.7	14.5	14.6	13.6
Total	9.3	9.2	9.2	9.6	9.9	9.7	9.6	10.0	10.1	10.2

Data Source: SC DHEC Biostatistics

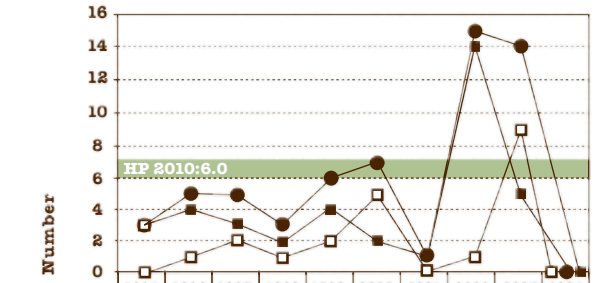
Percentage of Women Receiving Prenatal Care During First Trimester by Race



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	85.5	86.3	87.1	87.3	86.0	84.2	84.4	82.6	81.1	76.0
Black & Other	66.6	67.5	69.0	71.3	71.2	71.3	69.9	70.5	70.6	59.0
Total	78.5	79.4	80.5	81.4	80.6	79.4	79.2	78.3	77.4	69.0

*Excludes women with unknown and missing month of first prenatal care visit.
Data Source: SC DHEC Biostatistics

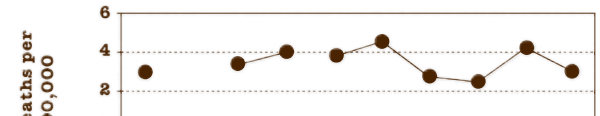
Influenzae B (Invasive Infection) Cases



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Ages 0-4	0	1	2	1	2	5	0	1	9	0
All Others	3	4	3	2	4	2	1	14	5	0
Total	3	5	5	3	6	7	1	15	14	0

Data Source: SC Reportable Disease Surveillance System, SC DHEC

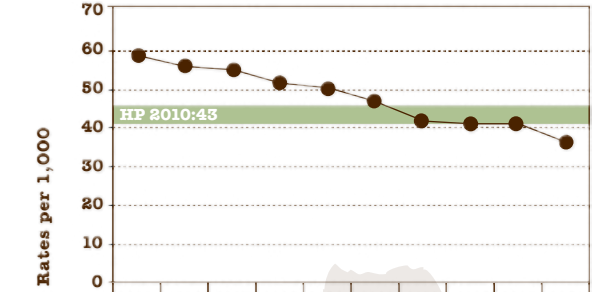
Child Homicide Rates Ages 1-4



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	2.7	*	3.4	4.0	3.9	4.3	2.8	2.3	4.1	2.7

* < 5 deaths
Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

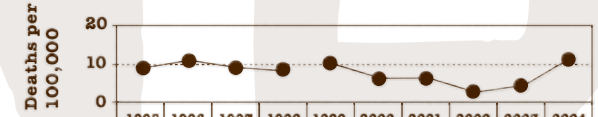
Teenage Pregnancy Rates Ages 15-17



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	55.5	53.0	52.1	48.5	46.5	43.2	38.6	38.2	38.2	36.6

Data Source: SC DHEC Biostatistics

Teenage Suicide Rates Ages 15-19



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	9.5	12.3	6.5	8.5	10.2	6.1	6.0	3.9	5.5	11.5

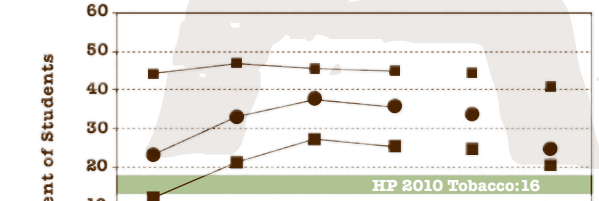
Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

Children Hospitalized for Chickenpox Ages 0-4

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	13.9	13.4	10.3	7.9	6.0	5.2	7.1	4.2	2.2

Data Source: Hospital Discharge Survey, SC Budget & Control Board,
Office of Research & Statistics

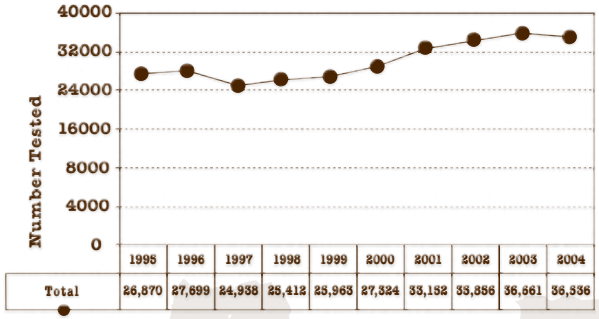
Substance Abuse Among High School Students



	1993	1995	1997	1999	2001	2003
Tobacco	23.0	32.6	38.6	36.0	33.0	23.8
Alcohol	44.3	46.4	45.3	45.4	44.0	40.6
Marijuana	12.5	20.8	26.5	24.5	23.9	21.8
Cocaine	2.2	3.0	2.4	3.5	2.7	3.5

Data Source: Youth Risk Behavior Survey, SCDOE
SC 2001 and 2003 are unweighted

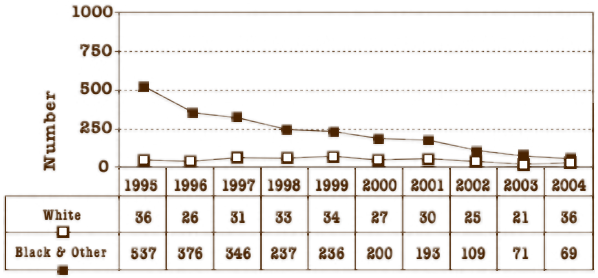
HIV Testing in DHEC Clinics Ages 20-44



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	26,870	27,699	24,938	25,412	25,963	27,324	33,152	33,356	36,661	36,336

Data Source: Bureau of Laboratories, SC DHEC

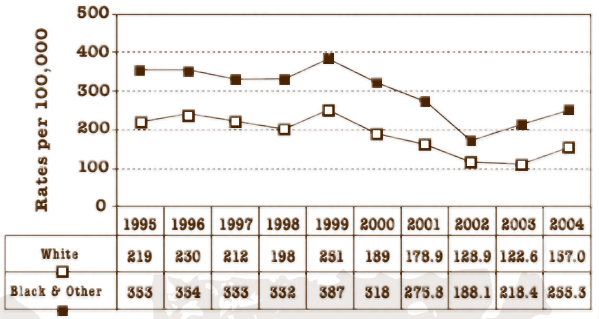
Infectious Syphilis Cases by Year of Diagnosis, All Ages



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	36	26	31	33	34	27	30	25	21	36
Black & Other	537	376	346	237	236	200	193	109	71	69

Data Source: SC Reportable Disease Surveillance System, SC DHEC

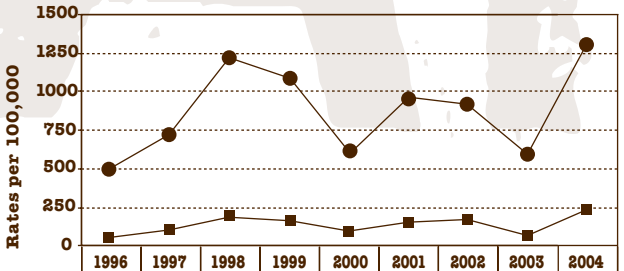
Pelvic Inflammatory Disease Rates All Ages



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White	219	230	212	198	251	189	178.9	128.9	122.6	157.0
Black & Other	353	354	333	332	387	318	275.8	188.1	218.4	255.5

Data Source: Hospital Discharge Survey, SC Budget & Control Board, ORS

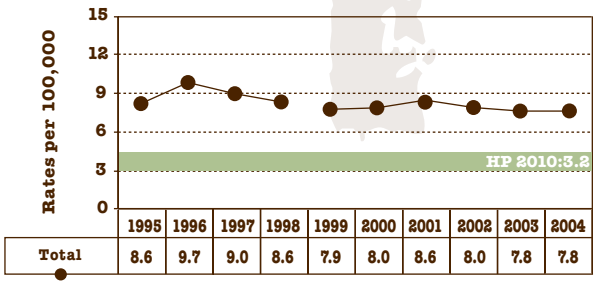
Chlamydia Genital Infection Rates Ages 20-44



	1996	1997	1998	1999	2000	2001	2002	2003	2004
Female	499	713	1226	1078	639	944	916	610	1270.9
Male	78	115	182	152	108	158	168	90	249.0

Data Source: SC Reportable Disease Surveillance System, SC DHEC

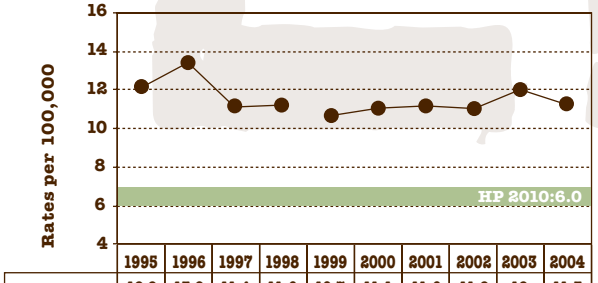
Age-Adjusted Homicide Rates All Ages



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	8.6	9.7	9.0	8.6	7.9	8.0	8.6	8.0	7.8	7.8

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10
Age adjustment uses 2000 standard population

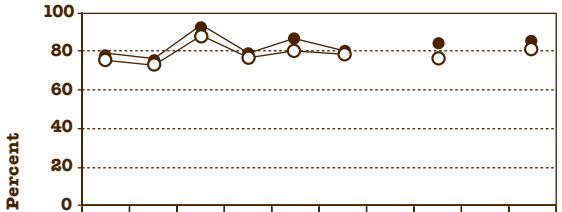
Age-Adjusted Suicide Rates All Ages



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Total	12.2	13.8	11.4	11.6	10.7	11.1	11.6	11.2	12	11.3

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10
Age adjustment uses 2000 standard population

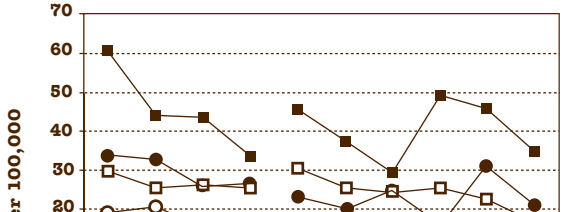
Prevalence of PAP Screening (past 3 years), Ages 45 and Older



	1995	1996	1997	1998	1999	2000	2001*	2002	2003*	2004
White Female	81.4	79.7	88.0	76.12	79.9	82.2	NA	75.2	NA	82.8
Black Female	78.5	76.1	92.6	75.77	85.5	80.0	NA	83.1	NA	83.5

Data Source: Behavior Risk Factor Surveillance System, SC DHEC
*Question not asked on 2001 and 2003 BRFSS

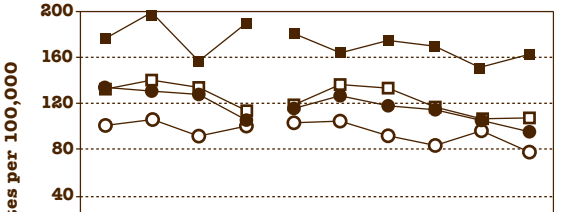
Colorectal Cancer Death Rates* Ages 45-64



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	29.9	26.1	27.3	25.8	30.3	25.3	24.0	26.5	22.0	18.8
White Female	19.0	20.7	16.6	14.0	16.0	18.8	15.4	17.6	14.5	18.7
Black Male	61.6	43.8	42.5	32.7	46.4	38.5	29.8	49.1	46.4	35.8
Black Female	33.4	33.2	26.8	27.0	24.0	20.4	24.9	16.8	31.4	21.4

*Age-specific rates
Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-10

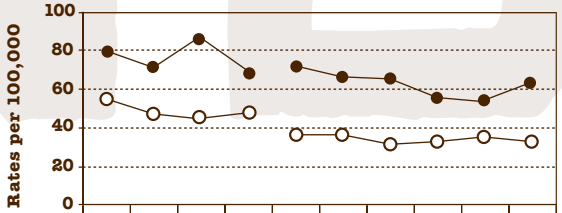
Colorectal Cancer Death Rates* Ages 65 and Older



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	133.4	141.3	135.4	114.8	119.1	138.2	134.3	117.7	107.0	107.8
White Female	100.2	106.4	91.1	100.1	102.7	104.3	91.3	83.7	96.9	79.9
Black Male	177.0	197.9	158.5	190.3	182.0	165.0	176.4	170.6	152.7	161.0
Black Female	135.5	131.7	128.7	104.8	115.1	126.3	119.2	114.4	107.1	94.8

*Age-specific rates
Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-10

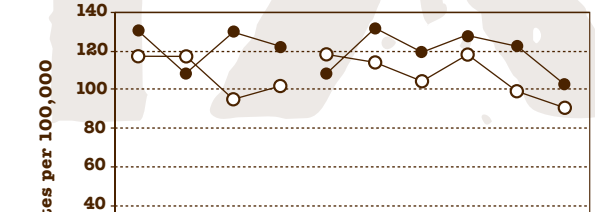
Breast Cancer Death Rates Ages 45-64



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Female	56.2	47.2	44.9	48.1	38.0	38.1	33.9	35.8	37.8	35.7
Black Female	81.7	72.1	87.7	67.2	74.6	65.1	64.5	54.6	54	63

Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-10
*Age-specific rates

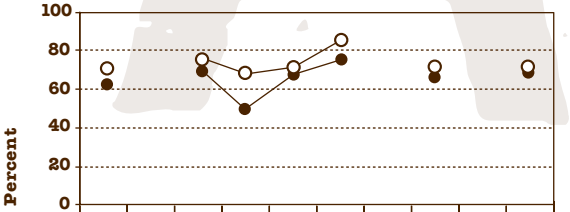
Breast Cancer Death Rates Ages 65 and Older



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Female	117.3	119.2	96.3	103.4	119.8	117.0	106.0	119.3	99.1	93.1
BlackFemale	132.3	113.8	131.9	123.9	113.5	133.9	120.7	127.6	121.5	102.1

Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-10
*Age-specific rates

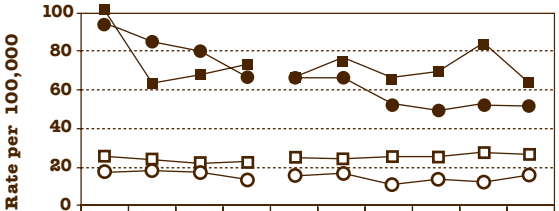
Mammogram & Clinical Breast Exam (past 2 years), Ages 45-64



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Female	70.2	NA	75.1	67.02	73.0	83.0	NA	72.3	NA	72.5
Black Female	63.2	NA	68.2	52.5	67	76.6	NA	65.4	NA	68.8

Data Source: Behavior Risk Factor Surveillance System, SC DHEC
* Question not asked on 2001 and 2003 BRFSS

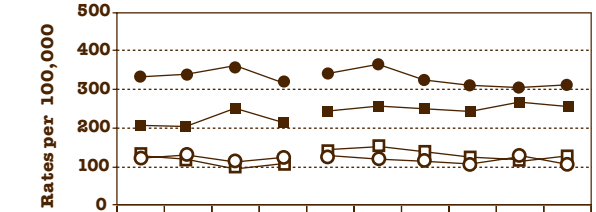
Diabetes Death Rates Ages 45-64



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	27.9	25.3	25.6	24.5	26.5	25.0	27.9	27.6	29.8	28.5
White Female	18.2	19.9	19.8	15.0	16.3	18.2	11.7	15.5	13.7	16.6
Black Male	102.6	65.6	69.0	75.2	67.0	74.2	64.3	69.3	82.0	62.6
Black Female	92.0	85.9	79.4	66.3	67.1	66.6	52.1	49.0	54.7	52.9

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

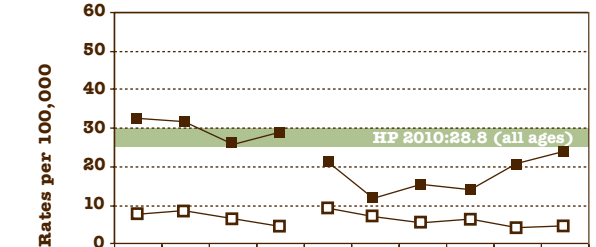
Diabetes Death Rates Ages 65 and Older



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	124.1	119.7	101.5	101.5	126.3	147.7	129.9	119.5	111.8	120.0
White Female	120.9	108.9	110.7	113.1	123.9	114.3	109.6	106.1	113.3	105.0
Black Male	209.7	206.1	255.2	222.0	258.5	268.2	255.6	249.7	283.2	263.5
Black Female	338.0	338.1	368.0	319.2	350.1	380.1	318.2	306.4	301.0	306.2

Data Source: SC DHEC Biostatistics
Years 1999+ used ICD-10

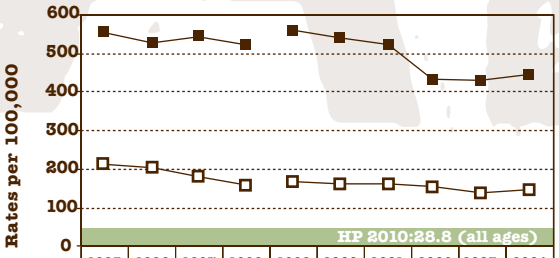
Prostate Cancer Death Rates, Ages 45-64



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	8.7	9.4	7.2	4.9	9.2	8.1	6.2	7.3	4.5	5.1
Black Male	32.3	32.1	27.6	30.5	21.6	12.2	16.8	15.2	21.5	24.4

Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-10
*Rates calculated using small numbers are unreliable and should be used cautiously.

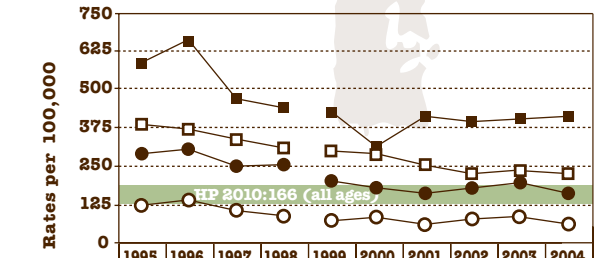
Prostate Cancer Death Rates Ages 65 and Older



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	219.2	210.8	185.1	159.9	172.5	163.6	161.3	159.8	133.9	154.3
Black Male	558.3	534.1	561.5	523.2	572.3	541.5	516.4	425.2	421.1	431.8

Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-10

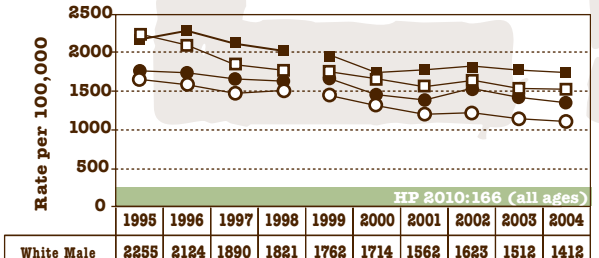
Heart Disease Death Rates Ages 45-64



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	385.0	368.8	303.6	292.3	287.7	276.9	254.9	243.1	246.2	243.3
White Female	126.2	132.0	114.2	104.5	90.5	95.7	83.2	91.4	92.3	87.6
Black Male	615.7	662.2	489.8	473.8	441.0	364.5	438.6	386.5	391.7	404.1
Black Female	323.3	336.6	251.0	251.2	208.0	206.2	192.7	194.0	198.9	174.8

Data Source: SC DHEC Biostatistics
Year 1999+ used ICD-10

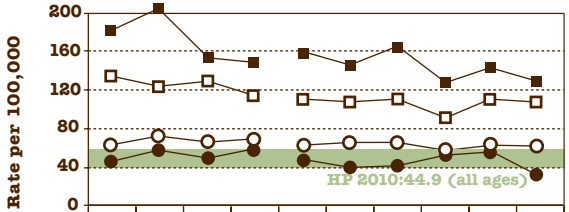
Heart Disease Death Rates Ages 65 and older



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	2255	2124	1890	1821	1762	1714	1562	1623	1512	1412
White Female	1658	1638	1512	1525	1461	1401	1327	1290	1255	1122
Black Male	2282	2391	2249	2156	1923	1846	1897	1807	1749	1739
Black Female	1881	1852	1796	1766	1699	1588	1471	1509	1427	1392

Data Source: SC DHEC Biostatistics
Year 1999+ used ICD-10

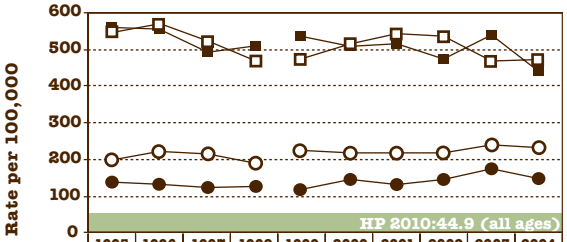
Lung Cancer Death Rates
Ages 45-64



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	133.0	121.6	129.1	109.8	107.4	100.8	108.3	91.4	108.5	103.5
White Female	59.6	71.2	61.2	64.6	60.3	61.3	65.3	59.1	60.1	59.3
Black Male	181.8	204.2	156.4	151.4	158.7	145.6	161.1	126.0	151.6	126.0
Black Female	42.6	56.1	41.5	54.1	42.3	40.0	41.2	49.7	51.9	35.5

Data Source: SC DHEC PHSIS-SCCCR
Year 1999+ used ICD-10

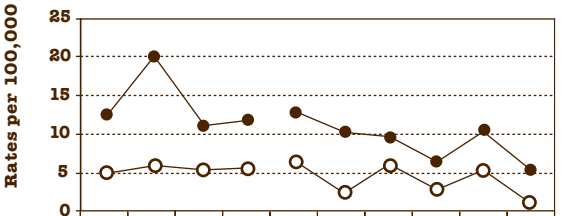
Lung Cancer Death Rates
Ages 65 and Older



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	561.0	573.0	512.4	481.7	477.0	512.0	534.2	526.3	482.5	485.8
White Female	196.1	220.4	220.5	207.6	235.9	225.4	226.3	223.2	243.6	230.0
Black Male	574.6	561.2	521.2	512.6	548.6	505.4	513.8	477.1	527.0	439.1
Black Female	143.7	139.8	133.5	131.8	127.9	155.1	132.7	143.7	172.2	142.9

Data Source: SC DHEC PHSIS-SCCCR
Year 1999+ used ICD-10

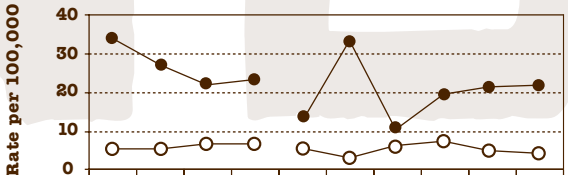
Cervical Cancer Death Rates
Ages 45-64



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Female	5.2	6.3	5.5	5.6	6.0	2.9	6.3	3.5	5.6	1.8
BlackFemale	12.7	20.6	12.0	12.2	12.4	10.2	9.3	6.3	10.3	5.4

Rates calculated using small numbers are unreliable and should be used cautiously
Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-10

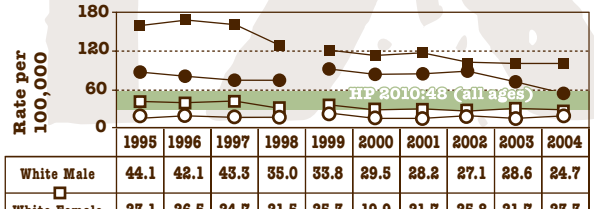
Cervical Cancer Death Rates
Ages 65 and Older



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Female	5.7	5.1	7.7	7.0	6.0	3.2	6.2	8.8	4.8	4.3
BlackFemale	34.3	27.6	22.8	23.8	14.4	33.5	10.6	19.1	21.7	21.9

Rates calculated using small numbers are unreliable and should be used cautiously
Data Source: SC DHEC PHSIS-SCCCR
Years 1999+ used ICD-10

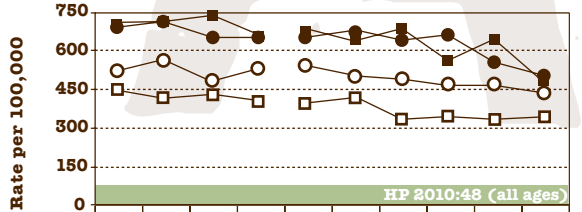
Stroke Death Rates
Ages 45-64



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	44.1	42.1	43.3	35.0	33.8	29.5	28.2	27.1	28.6	24.7
White Female	23.1	26.5	24.7	21.5	25.3	19.9	21.7	25.8	21.7	23.3
Black Male	162.7	176.5	161.0	125.3	116.4	99.6	108.9	88.0	88.6	88.6
Black Female	84.0	82.4	73.8	73.3	92.0	61.9	68.4	72.1	60.1	56.3

Data Source: SC DHEC Biostatistics
Year 1999+ used ICD-10

Stroke Death Rates
Ages 65 and Older



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
White Male	449.4	425.5	426.8	406.0	404.1	426.0	359.7	376.9	343.8	349.5
White Female	542.8	569.8	487.0	528.4	539.0	508.2	493.2	464.9	464.6	437.1
Black Male	697.2	740.2	749.5	671.2	701.6	642.1	705.6	556.2	628.0	485.5
Black Female	708.7	736.4	677.4	684.5	668.2	669.3	618.4	640.7	528.1	501.6

Data Source: SC DHEC Biostatistics
Year 1999+ used ICD-10

WHAT IS HEALTHY PEOPLE 2010?

Throughout this report you have seen references to Healthy People 2010 objectives. These are the nation's health objectives for the first decade of the new century. These objectives are used by states, communities, organizations and others to develop health improvement programs. Healthy People 2010 builds on initiatives pursued over the past two decades. The 1979 Surgeon General's Report, "Healthy People," and "Healthy People 2000: National Health Promotion and Disease Prevention Objectives," both established national health objectives and served as the basis for the development of state and community plans.

Like its predecessors, Healthy People 2010 was developed through a broad consultation process, built on the best scientific knowledge and designed to measure programs over time.

Healthy People 2010 is designed to achieve two overarching goals:

Goal 1: Increase Quality and Years of Healthy Life

Goal 2: Eliminate Health Disparities

The first goal of Healthy People 2010 is to help people of all ages increase life expectancy and improve their quality of life. The second goal of Healthy People 2010 is to eliminate health disparities among different segments of the population. Healthy People 2010 has a number of focus areas and 10 high priority areas for the nation's health. These priorities, the leading health indicators, are:

1. Physical Activity
2. Overweight and Obesity
3. Tobacco Use
4. Substance Abuse
5. Responsible Sexual Behavior
6. Mental Health
7. Injury and Violence
8. Environmental Quality
9. Immunization
10. Access to Health Care

Appendix B

South Carolina is committed to improving the health status in South Carolina by working toward the Healthy People 2010 goals and objectives.

South Carolina uses Healthy People 2010 goals to measure progress toward health improvement. Each of the 10 Healthy People 2010 leading health indicators has one or more objectives associated with it. As a group, the leading health indicators reflect the major health concerns in the United States at the beginning of the 21st century. Indicators were selected based on their ability to motivate action, the availability of data to measure progress, and their importance as public health issues.

HEALTHY PEOPLE 2010 OBJECTIVE NUMBERS/DATA SOURCES

01-01 Current Population Survey (CPS), U.S. Census Bureau, Bureau of Labor & Statistics
http://www.census.gov/

08-01a SC: DHEC Environmental Quality Control (EQC), Bureau of Environmental Services, Division of Air Quality Analysis
http://www.scdhec.gov/environment
US: Aerometric Information Retrieval System (AIRS), EPA, OAR
http://www.epa.gov/air/data

14-24a SC and US: National Immunization Survey (NIS), CDC, NIP and NCHS
http://www.cdc.gov/nis

14-29a SC: DHEC Behavior Risk Factor Survey (BRFSS), Division of Biostatistics
http://www.scdhec.gov/datastat

14-29b
US: Behavior Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP
http://www.cdc.gov/nccdphp/brfss

15-15a SC: DHEC Division of Biostatistics, Office of Public Health Statistics and Information Services
http://www.scdhec.gov/scan

15-32 SC: DHEC Division of Biostatistics, Office of Public Health Statistics and Information Services
http://www.scdhec.gov/scan

16-06a US: National Vital Statistics System - Mortality (NVSS-M), CDC, NCHS
http://www.cdc.gov/nchs/nvss.htm

19-02 SC: DHEC Behavior Risk Factor Survey (BRFSS), Division of Biostatistics.
http://www.scdhec.gov/datastat
US: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS
http://www.cdc.gov/nchs/nhanes.htm
SC: DHEC Behavior Risk Factor Survey (BRFSS), Division of Biostatistics
http://www.scdhec.gov/datastat
US: Behavior Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP
http://www.cdc.gov/brfss/

22-02 SC: DHEC Behavior Risk Factor Survey (BRFSS), Division of Biostatistics
http://www.scdhec.gov/datastat
US: Behavior Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP
http://www.cdc.gov/brfss

22-07 Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP

25-11 http://www.cdc.gov/healthyyouth/yrbs/index.htm

26-10a SC: Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP
http://www.cdc.gov/healthyyouth/yrbs/index.htm

US: National Household Survey on Drug Abuse (NHSDA), SAMHSA
http://www.samhsa.gov/

26-10c SC and US: National Household Survey on Drug Abuse (NHSDA), SAMHSA
http://www.samhsa.gov/

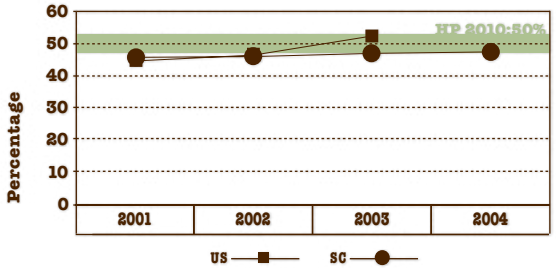
26-11c SC: DHEC Behavior Risk Factor Survey (BRFSS), Division of Biostatistics
http://www.scdhec.gov/datastat
US: Behavior Risk Factor Surveillance System (BRFSS), CDC, NCCDPHP
http://www.cdc.gov/brfss

27-01a SC: DHEC Behavior Risk Factor Survey (BRFSS), Division of Biostatistics
http://www.scdhec.gov/datastat
US: National Health Interview Survey (NHIS), CDC, NCHS
http://www.cdc.gov/nchs/nhis.htm

27-02b Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP
http://www.cdc.gov/healthyyouth/yrbs/index.htm

NA indicates data not available
http://www.healthypeople.gov

Adult Participation in Regular Physical Activity, S.C. and U.S.



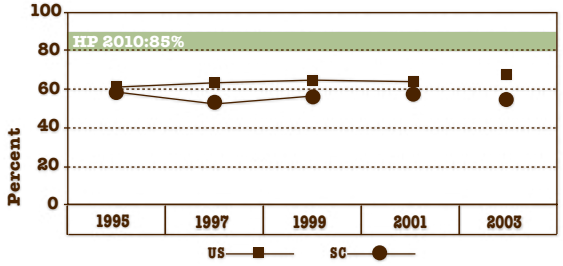
Data Source: BRFSS

*All respondents 18 and older who engage in 30 minutes of moderate physical activity 5 or more days a week or vigorous physical activity for 20 minutes per day, 3 or more days per week

Note: SC statistics do not include vigorous physical activity.

*US 2004 Data Not Available.

Adolescent Participation in Vigorous Physical Activity, * S.C. and U.S.

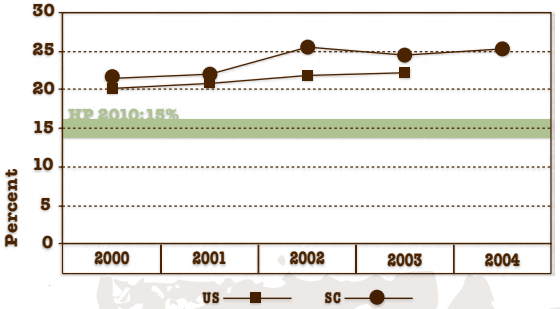


Data Source: YRBSS

*Adolescents in grades 9-12 who engage in 20 minutes of vigorous physical activity 3 or more days per week.

SC 2001, 2003 are unweighted

Obese Adults, * Age 18 and Older S.C. and U.S.



Data Source: BRFSS

*Obesity defined as a BMI of 30 kg/m^2 or more

Physical Activity

22-02 Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

Physical Activity

22-07 Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness three or more days per week for 20 or more minutes per occasion.

Overweight and Obesity

19-02 Reduce the proportion of adults who are obese.

Adult Participation in Regular Physical Activity, SC by Race

Year	White %	Black %
2001	48.2	37.6
2002	48.8	34.7
2003	48.9	37.1
2004	49.1	36.9

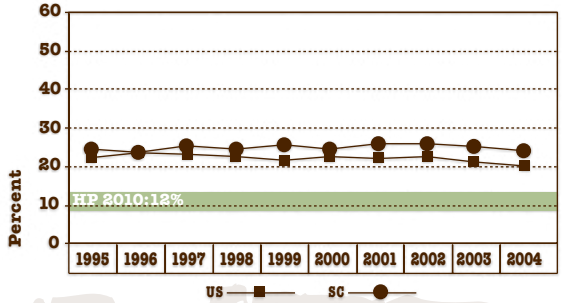
Adolescent Participation in Vigorous Physical Activity, SC by Race

Year	White %	Black %
1995	59.4	42.5
1996	NA	NA
1997	59.8	44.3
1998	NA	NA
1999	61.8	48.3
2000	NA	NA
2001	64.1	52.2
2002	NA	NA
2003	63.8	46.4

Obese Adults, SC by Race

Year	White %	Black %
2000	18.1	33.6
2001	18.7	35.4
2002	21.5	36.9
2003	20.4	37.8
2004	21.1	36.0

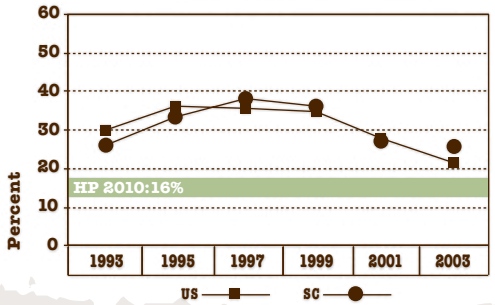
Current Cigarette Smoking * Among Adults, S.C. and U.S.



Data Source: BRFSS

*Adults ages 18 years and older who smoked more than 100 cigarettes in their lifetime and smoked on some or all days in the past month.

Current Cigarette Smoking * Among Adolescents in Grades 9-12, S.C. and U.S.

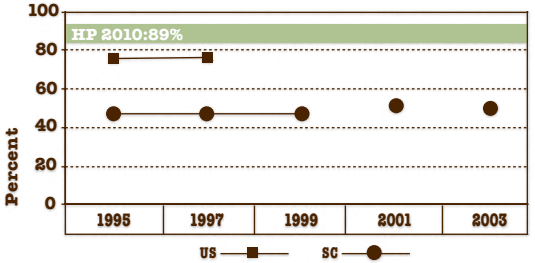


Data Source: YRBSS, US SAMHSA

*Adolescents who smoked one or more cigarettes in the past 30 days.

SC 2001, 2003 are unweighted

U.S. Alcohol & Drug-Free 12-17 Year Olds in Past 30 Days Compared to S.C. Public High School Students



Data Source: SC YRBSS, US SAMHSA

SC 2001, 2003 are unweighted

Tobacco Use

27-01a Reduce cigarette smoking by adults.

Tobacco Use

27-02b Reduce cigarette smoking by adolescents.

Substance Abuse

26-10a Increase the proportion of adolescents not using alcohol or any illicit drugs during the past 30 days.

Cigarette Smoking Among Adults, SC by Race

Year	White %	Black %
1995	25.5	19.8
1996	26.8	20.1
1997	24.9	19.4
1998	26.5	19.2
1999	25.5	18.3
2000	26.7	19.1
2001	26.7	23.7
2002	28.1	21.3
2003	25.2	24.9
2004	24.6	21.7

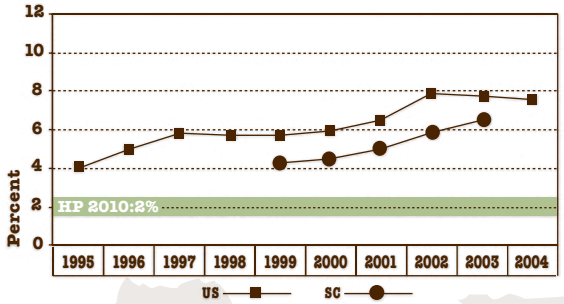
Cigarette Smoking Among Adolescents in Grades 9-12, SC by Race

Year	White %	Black %
1993	37.3	10.8
1994	NA	NA
1995	42.0	19.0
1996	NA	NA
1997	47.2	28.4
1998	NA	NA
1999	45.9	22.8
2000	NA	NA
2001	34.7	16.5
2002	NA	NA
2003	32.7	16.7

Adolescents Aged 12-17 Years Who Reported No Use of Alcohol or Illicit Drugs in Past 30 Days, SC by Race

Year	White %	Black %
1995	42.6	51.7
1996	NA	NA
1997	42.6	51.1
1998	NA	NA
1999	41.3	53.9
2000	NA	NA
2001	48.2	56.3
2002	NA	NA
2003	46.6	55.7

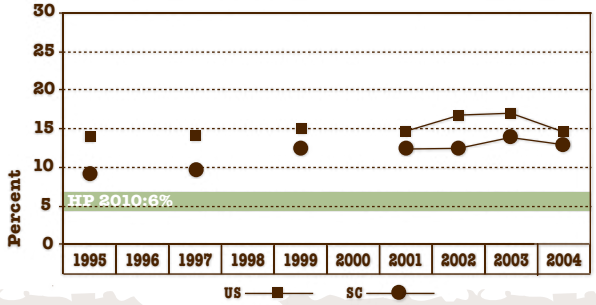
Proportion of Adults Using Illicit Drugs in Past 30 Days, S.C. and U.S.



Data Source: SAMHSA, NHSDA

2004 SC Rate Not Available

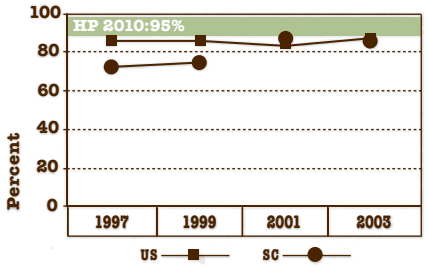
Proportion of Adults Binge Drinking, * S.C. and U.S.



Data Source: BRFSS

*Adults aged 18 years and older who reported having 5 or more drinks on an occasion, one or more times in the past month.

Adolescents in Grades 9-12 Who Are Not Sexually Active or Sexually Active and Used Condoms, S.C. and U.S.



Data Source: YRBSS

SC 2001, 2003 are unweighted

Substance Abuse

26-10c Reduce the proportion of adults using illicit drugs during the past 30 days. South Carolina data by race not available.

Substance Abuse

26-11c Reduce the proportion of adults engaging in binge drinking of alcoholic beverages during the past month.

Responsible Sexual Behavior

25-11 Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active.

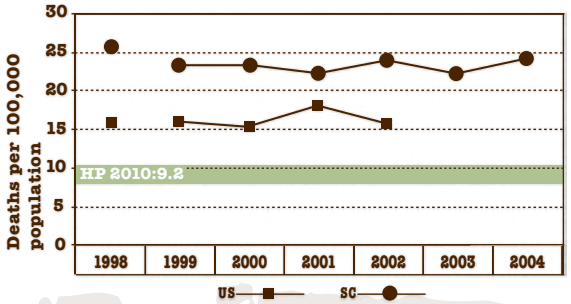
Adults Who Reported Binge Drinking in Past 30 Days, SC by Race

Year	White %	Black %
1995	9.8	7.8
1996	NA	NA
1997	11.2	13.4
1998	NA	NA
1999	13.4a	8.6
2000	NA	NA
2001	13.1	9.5
2002	14.1	7.5
2003	15.8	10.9
2004	14.1	11.8

Adolescents in Grades 9-12 Who Are Not Sexually Active or Sexually Active and Used Condoms, SC by Race

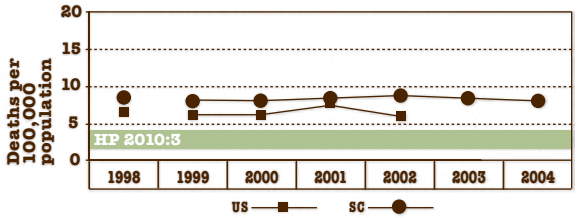
Year	White %	Black %
1997	79.6	70.4
1998	NA	NA
1999	80.6	72.8
2000	NA	NA
2001	86.5	85.9
2002	NA	NA
2003	87.2	85.2

Age-Adjusted Motor Vehicle Death Rates, S.C. and U.S.



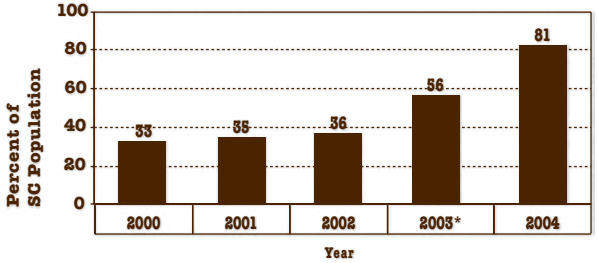
Data Source: SC DHEC Biostatistics, US NCHS
Age adjustment uses 2000 standard population.
Years 1999+ used ICD-10. 2003 and 2004 US data not available.

Age-Adjusted Homicide Death Rates, S.C. and U.S.



Data Source: SC DHEC Biostatistics, US NCHS
Age adjustment uses 2000 standard population.
Years 1999+ used ICD-10. 2003 and 2004 US data not available.

South Carolinians Living in Areas Meeting the 8-hour Ozone Standard



Data Source: 2000 Census Bureau Data and DHEC, Ozone Monitoring Data

Injury and Violence

15-15a Reduce deaths caused by motor vehicles.

Injury and Violence

15-32 Reduce homicides.

Environmental Quality

08-01a Reduce the proportion of persons exposed to air that does not meet the U.S. Environmental Protection Agency's health-based standards for ozone.

Age-Adjusted Motor Vehicle Death Rates (per 100,000), SC by Race

Year	White	Black & Other
1998	24.1	28.7
1999	21.2	29.5
2000	22.1	26.8
2001	22.3	25.1
2002	23.8	26.5
2003	22.9	22.7
2004	23.4	27.2

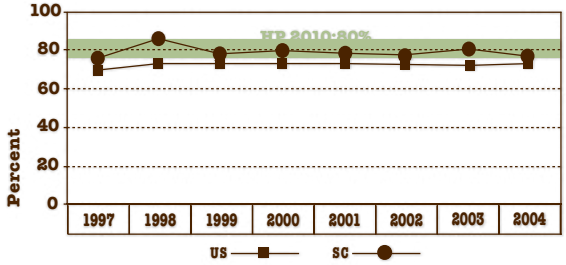
Note: For 1998, cause of death classification based on ICD-9; for 1999, cause of death classification based on ICD-10. Age adjustment uses 2000 standard population.

Age-Adjusted Homicide Death Rates (per 100,000), SC by Race

Year	White	Black & Other
1998	5.1	16.0
1999	4.7	14.4
2000	5.1	14.0
2001	5.5	15.3
2002	5.0	14.0
2003	4.7	14.2
2004	4.2	15.0

Note: For 1998, cause of death classification based on ICD-9; for 1999, cause of death classification based on ICD-10. Age adjustment uses 2000 standard population.

Children Ages 19 to 35 Months Who Received all Recommended Vaccines,* S.C. and U.S.

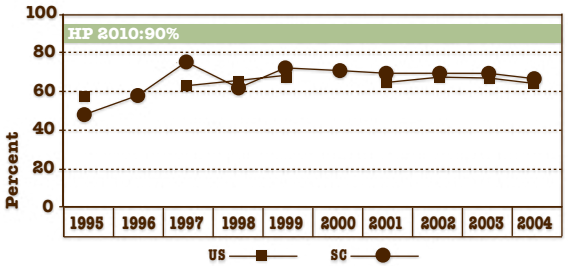


Data Source: NIS

*1997 - 2002 series 4:3:1:3:3 and 2002 > series 4:3:1:3:3:1

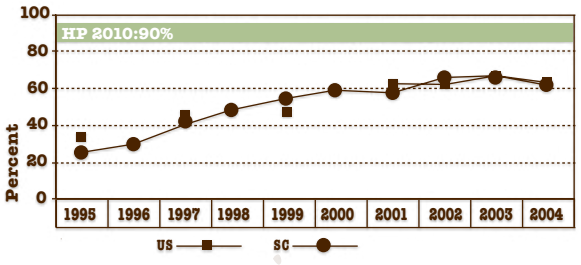
(4 DtaP, 3 polio, 1 MMR, 3Hib, 3 Hep B, 1 Varicella)

Adults Ages 65 Years and Older Who Received Influenza Vaccine in the Past 12 Months, S.C. and U.S.



Data Source: BRFSS
U.S. data not given years 1996 and 2000

Adults Ages 65 Years and Older Who Ever Received Pneumococcal Vaccine, S.C. and U.S.



Data Source: BRFSS
U.S. data not given for years 1996, 1998 and 2000

Immunization

14-24a Increase the proportion of young children who receive all vaccines that have been recommended for universal administration for at least five years.

Children Ages 19 to 35 Months Who Received all Recommended Vaccines, SC by Race

Year	White %	Black %
1997	70.1	80.3
1998	80.6	86.3
1999	81.4	73.2
2000	81.7	73.9
2001	81.9	78.3
2002	81.2	NA
2003	77.8	NA
2004	77.3	NA

Immunization

14-29a Increase the proportion of non-institutionalized adults 65 years and older who are vaccinated annually against influenza.

Adults Ages 65 Years and Older Who Received Influenza Vaccine in the Past 12 Months, SC by Race

Year	White %	Black %
1995	56.3	34.2
1996	59.4	53.3
1997	75.3	71.5
1998	67.4	44.5
1999	73.2	58.3
2000	72.3	61.9
2001	68.7	56.7*
2002	71.0	64.8
2003	72.8	56.9
2004	70.1	52.6

*Interpret with caution: Cell size less than 50.

Immunization

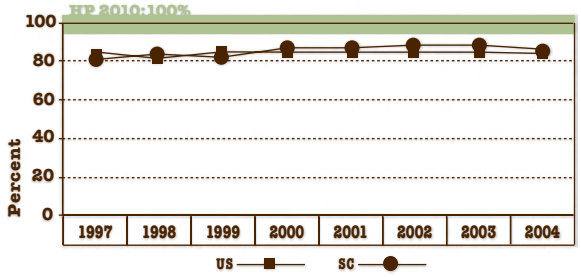
14-29b Increase the proportion of non-institutionalized adults 65 years old and older ever vaccinated against pneumococcal disease.

Adults Ages 65 Years and Older Who Ever Received Pneumococcal Vaccine, SC by Race

Year	White %	Black %
1995	30.8	13.0
1996	34.3	26.5
1997	47.0	19.1
1998	56.3	27.3
1999	61.0	38.9
2000	63.9	44.4
2001	63.7	31.4*
2002	67.6	54.2
2003	67.5	44.7
2004	68.4	50.7

*Interpret with caution: Cell size less than 50.

Persons Under Age 65 with Health Care Coverage, S.C. and U.S.

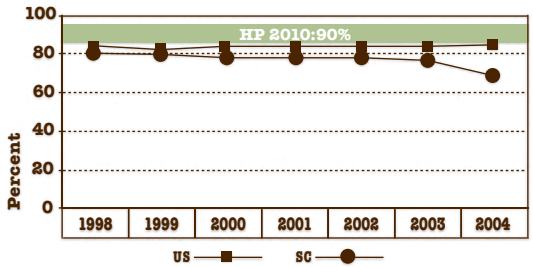


Data Source: CPS, US Census

Access to Health Care

01-01 Increase the proportion of persons with health insurance. South Carolina data by race not available.

Percentage of Women Who Began Prenatal Care in the First Trimester, S.C. and U.S.



Data Source: SC DHEC Biostatistics, US NCHS

Access to Health Care

16-06a Increase the proportion of pregnant women who begin prenatal care in the first trimester of pregnancy.

Percentage of Women Who Began Prenatal Care in the First Trimester, SC by Race

Year	White	Black & Other
1998	87.2	71.3
1999	86.0	71.2
2000	84.2	71.3
2001	84.4	69.9
2002	82.6	70.5
2003	81.1	70.6
2004	76.0	59.0

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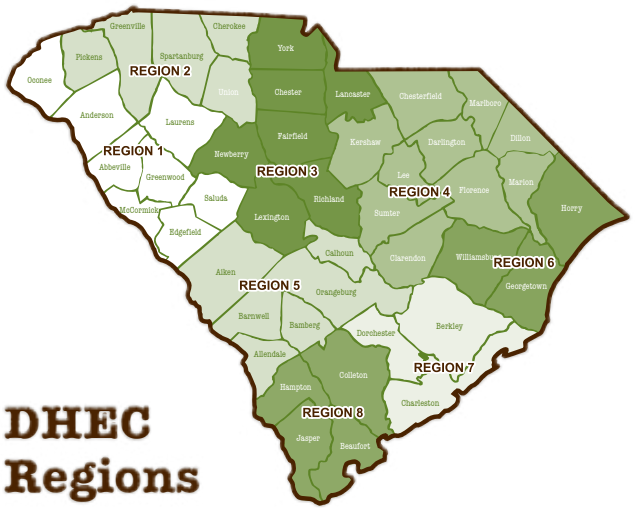

DHEC Regions

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PROMOTE PROTECT PROSPER
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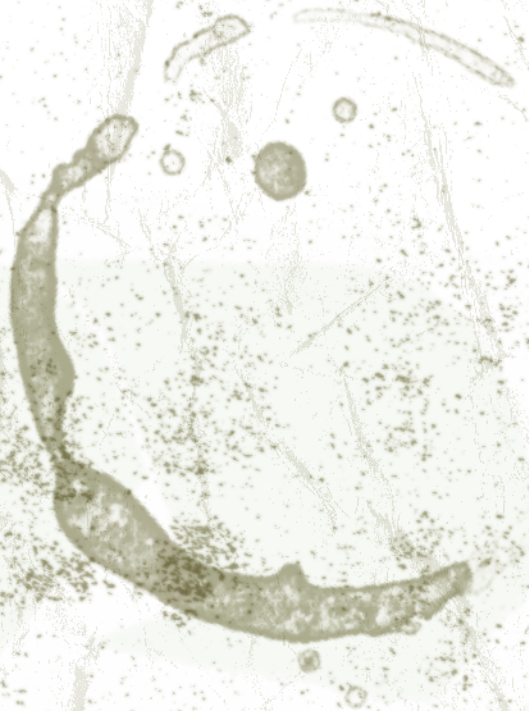

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